SAMSUNG

Television Video Cassette Recorder

Chassis : C15C (VER.1, TS-10)
Model : TB14A53X/RAD

SERVICE Manual

Television Video Cassette Recorder

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1. Precautions

Follow these safety, servicing and ESD precautions to prevent damage and protect against potential hazards such as electrical shock and X-rays.

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.

2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.

3. Make sure that there are no cabinet openings through which people—particularly children—might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

   If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (Figure 1-1):
   Warning: Do not use an isolation transformer during this test. Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANIS C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).

5. With the unit completely reassembled, plug the AC line cord directly into the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

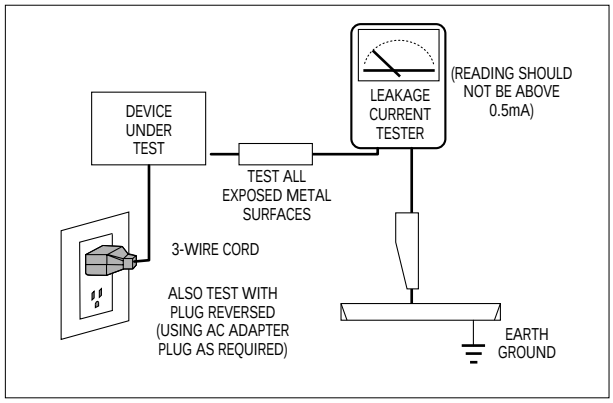

DEVICE UNDER TEST
LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5mA)
TEST ALL EXPOSED METAL SURFACES
3-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

Fig. 1-1 AC Leakage Test

6. Antenna Cold Check:
   With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong. Connect the other lead to the coaxial connector.

7. X-ray Limits:
   The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.

8. High Voltage Limits:
   High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced. (X-ray protection circuits also may be called "horizontal disable" or "hold-down".)

   Heed the high voltage limits. These include the X–ray Protection Specifications Label, and the Product Safety and X-ray Warning Note on the service data schematic.

2. Specifications

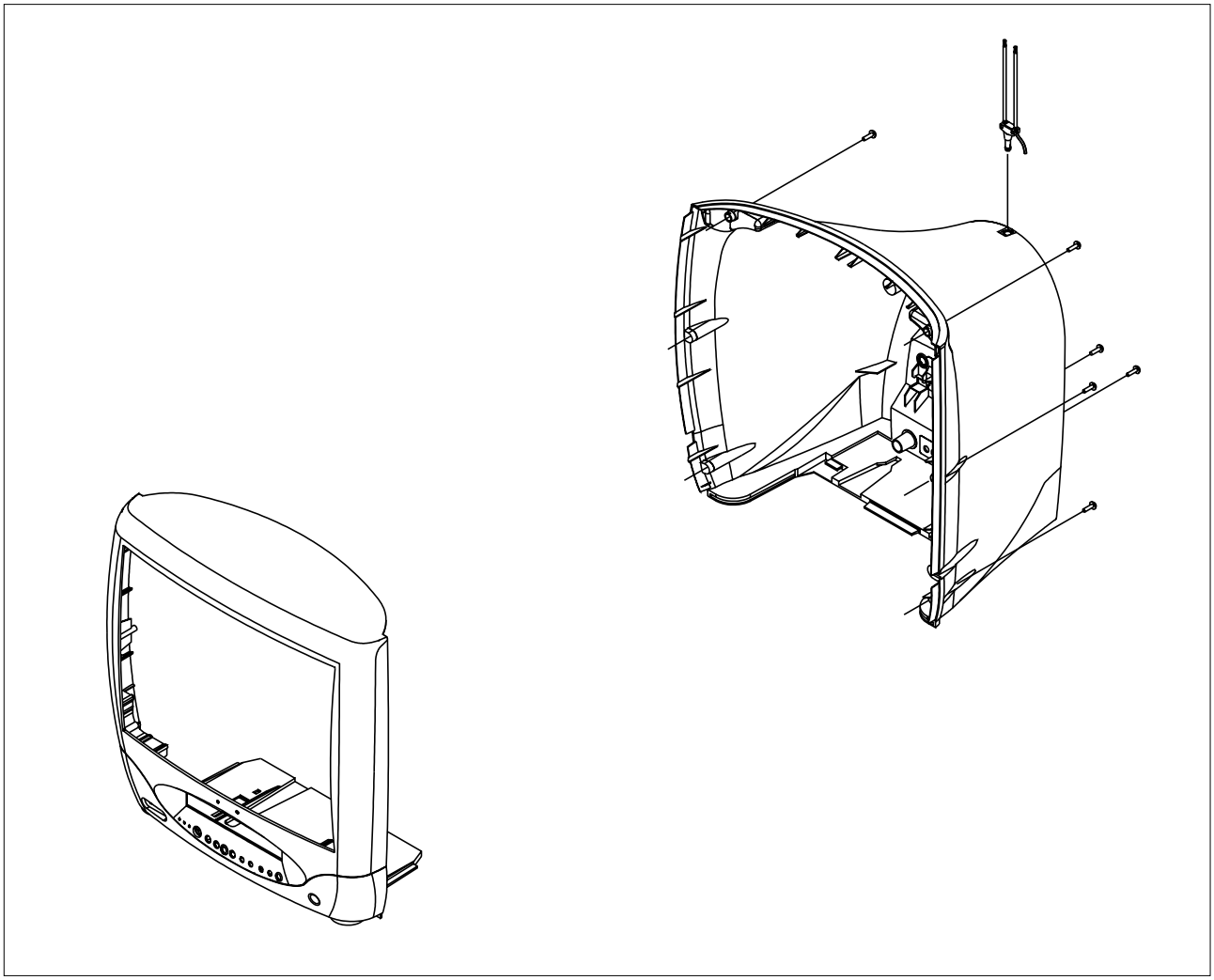
***T*he descriptions and characteristics given in this booklet are given for information purposes only and are subject to modification without notice.**

TELEVISION PART	
Colour systems	PAL(option) / SECAM(option) (UK;PAL)
TV standards	L/L'(option), B/G(option), D/K(option) (UK;I)
Number of channels	100 programmes
Reception range/cable TV	Hyperband/interband tuner
Aerial input	75 Ohms, coaxial cable
VCR PART	
Format	VHS standard (PAL / SECAM(option) / MESECAM(option) / NTSC in playback only)
Heads	Video: 2 rotary heads, LP(option), 4 Heads(option) Audio/Control: 1 stationary head (linear) Erase: 1 full track erase head System Video Normal CCIR System Audio Mono / NICAM&A2-STEREO
Luminance	FM azimuth recording
Colour	Down converted subcarrier phase shifted direct recording
FF/REW time	Less than 100 seconds in FF with E-120
Wow and flutter (WTD)	0.4% maximum (SP)
Frequency response	100 Hz - 8 KHz
GENERAL	
Power supply	220-240V~, 50Hz (110-260V~, 50/60Hz; option)
Consumption	14" (60W) 20"/21" (90W)
Audio output power	14" (1.5W) 20" (3W) 21" (1.5Watts x 2)
Number of loudspeakers	14"/20" (1) 21" (2)
Tube size	14" (37cm/34cmV) 20" (51cm/48cmV) 21" (55cm/51cmV)
Tube type	BLACK MATRIX
Sockets	1 full RGB SCART on the rear 1 RCA input (audio and video) on the front Earphones output (3.5 mm mini-jack) 1 aerial/cable TV coaxial input
Dimensions (W x D x H)	14" (368.5 x 388 x 381) 20" (488 x 477 x 488) 21" (520 x 495 x 508)
Weight	14" (11.7 kg) 20" (20.4 kg) 21" (23.2 kg)
Operating temperature	5°C - 40°C (41°F - 104°F)
Relative humidity	10% - 75%

3. Disassembly and Reassembly

3-1 Disassembly

3-1-1 Back Cover Removal



1. Remove the screws located on the side of the back cover.

4. Disassembly and Reassembly

4-1 Deck Parts Locations

4-1-1 Top View

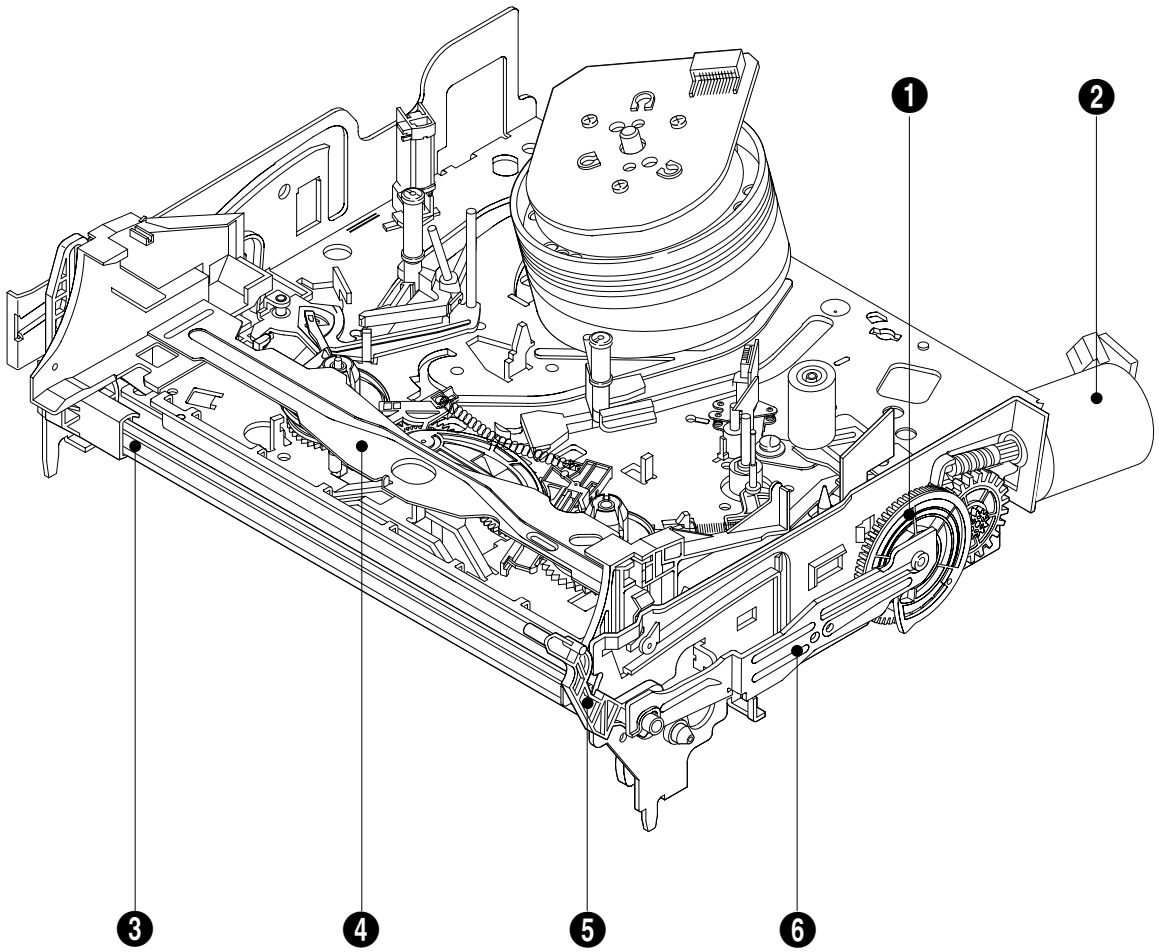
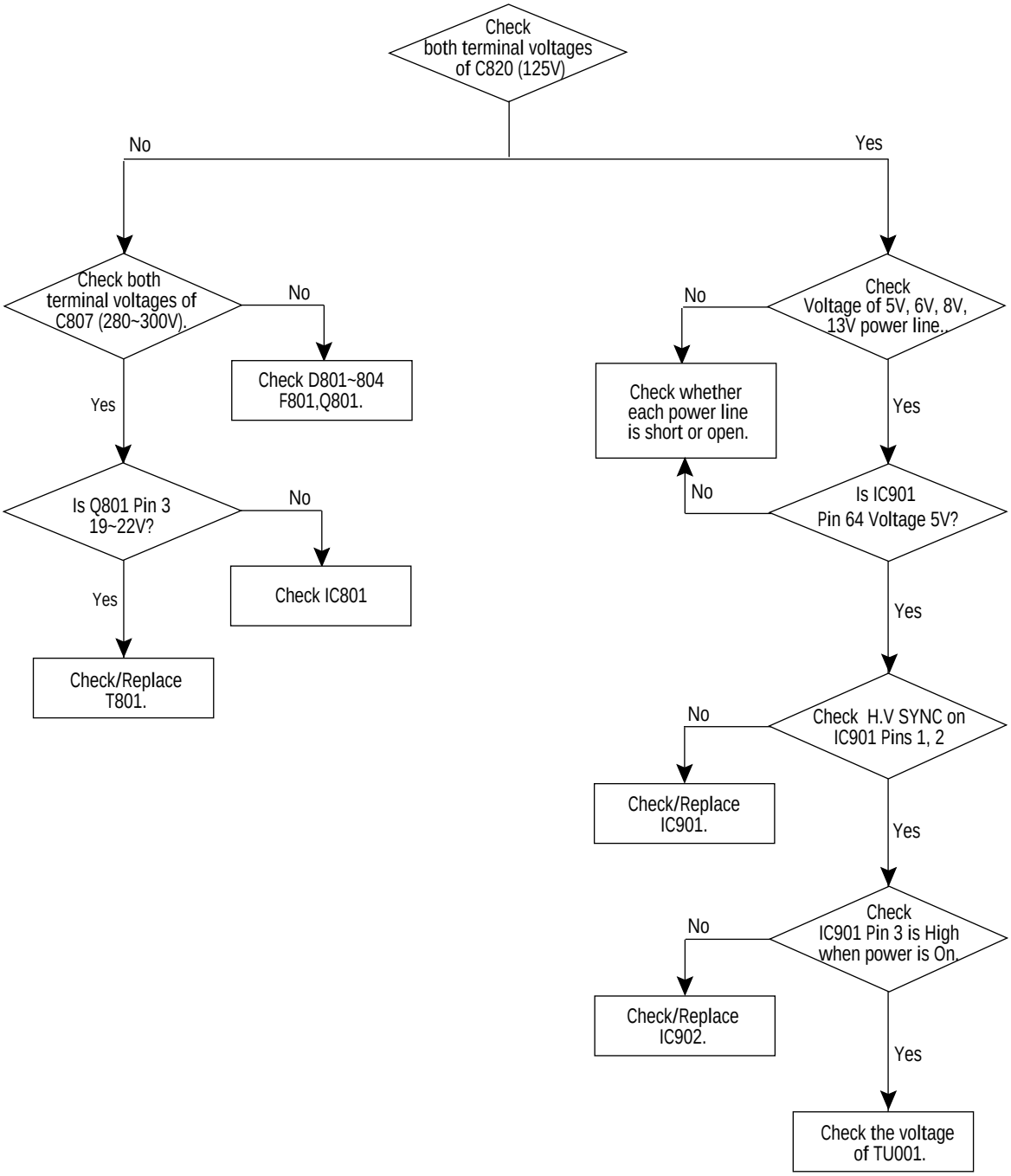


Fig. 4-1 Top parts Location-1

1. GEAR FL CAM
2. MOTOR LOADING ASS'Y
3. LEVER FL ARM ASS'Y
4. HOLDER FL CASSETTE ASS'Y
5. LEVER FL DOOR
6. SLIDER FL DRIVE

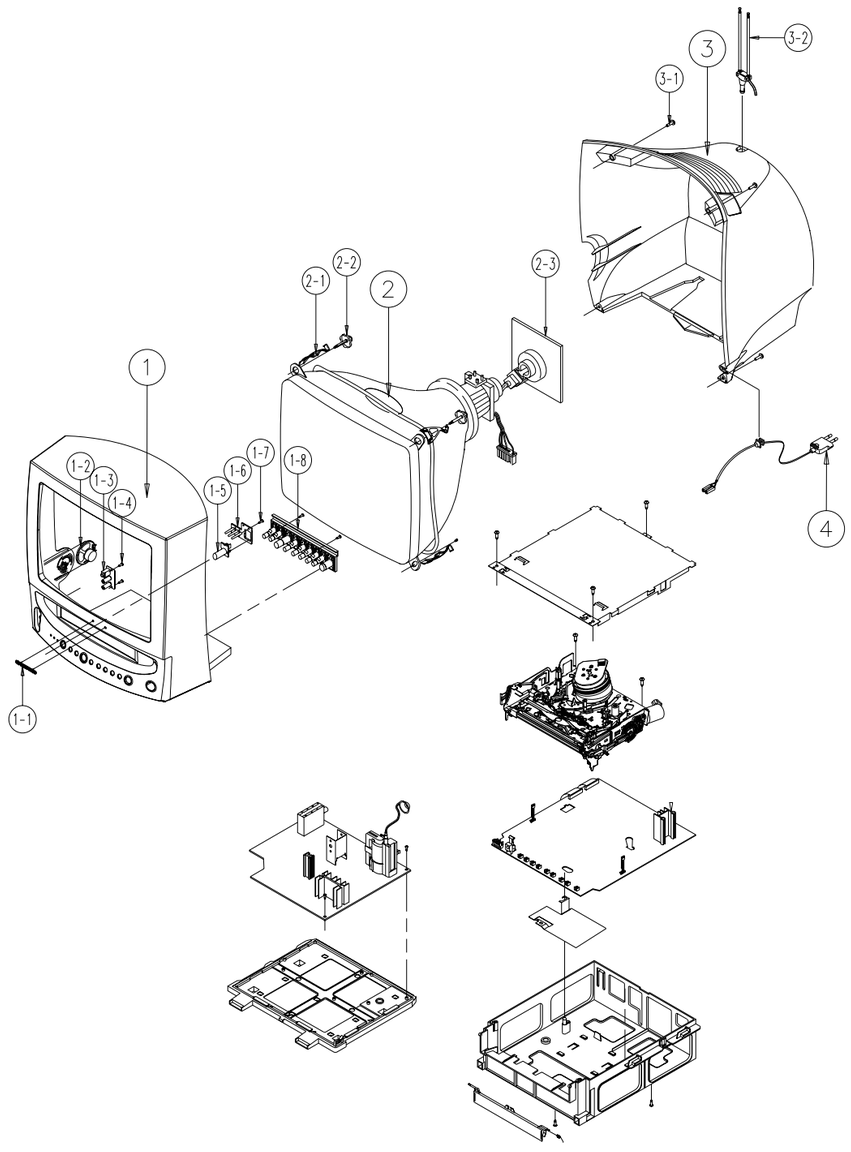
6. Troubleshooting

6-1 No Power (No Picture on)



7. Exploded View & Parts List

7-1 TB14A53X/RAD



No	Code No	Description;Specification	Q'ty	Remark
1	AA91-00184D	ASSY CABINET FRONT;-,14A5 MASTER,BK708P	1	
	AA64-31339P	CABINET FRONT;14A5,C5,BK708P HITRON EL,H	1	
1-1	AA64-70127F	BADGE-BRAND;AL,SAMSUNG,SILVER,L40,R800,N	1	
1-2	AA96-00149A	ASSY-SPEAKER;-,-,16 OHM,2.5W,3001-001015	1	
1-3	AA95-00630B	ASSY-PCB,A/V;-,14/20/21,C15C,PAL,-,MO	1	
1-4	6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	2	AV+CF
1-5	AA64-00018A	WINDOW-REMOCON;-,TVN-502V,-,PC,VIOLET,-,	1	
1-6	AA64-00012A	INDICATOR-LED;-,TVN-502V,-,PC,-,CLEAR,-	1	
1-7	6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	2	IND+CF
1-8	AA64-00051E	PANEL CONTROL;14A5 MAST,HIPS,-,V0,BLK,-,	1	
2	AA03-10002N	CRT-COLOR;-,A34KQV42X,-300MG,14,90DEG,5	1	
2-1	AA65-30016A	CLAMP-D,COIL;-,NYLON-66,V0,-,NTR,DADH-36	2	
2-2	AA60-10050R	SCREW-ASSY;-,SWRCH18A,M5,L31.5,HH,+,WC,-	4	CRT
2-3	3704-000103	SOCKET-CRT;10P,22.5,14.3,SN,ISMS01S/BK	1	
3	AA64-31340C	CABINET-BACK;-,14A5,C5,SEA ,HIPS,V0,BLK	1	
3-1	6002-000514	SCREW-TAPPING;RH,+,2,M4,L15,ZPC(BLK),SWR	4	CB+CF
3-2	AA42-00003A	ANT ROD;-,3S,720mm,ABS,UL/CSA,-	1	
4	AA96-20124A	ASSY-POWER,CORD;-,EP2/YES(AU),H/C250,KJP	1	

8. Electrical Parts List

8-1 TB14A53X/RAD

Loc. No.	Code No.	Description ; Specification	Remark

ASSY PCB MAIN(OPT)

1	*	AA94-02669C	ASSY PCB MAIN(OPT);TB14A53X/RAD,C15C,NEW	
..2	C237	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5	
..2	C807	2401-002241	C-AL;220uF,+30-10%,400V,GP,ST,30x40	
⚠ ..2	CR402S	2301-001219	C-FILM,MPE-PPF;3.9nF,5%,1.6KV,TP,29x8.5x	
⚠ ..2	CR403S	2306-000188	C-FILM,MPPF;330nF,5%,400V,TP,26x19.5x11,	
..2	GT02A	AA39-20010B	LEAD CONNECTOR-ASSY;,1P,YFH800-01,S,500,	
..2	HC002	AA13-00087A	IC HYBRID;-,TAR001,SIP,10P,-,BK	
..2	IC301	AA96-50345E	ASSY-H/S;-,VERT,AA62-30174A,TDA8356/N6A	S.N.A
...3		AA62-30174A	HEAT SINK-PS;-,SPC,T1.0,-,33X20X50,-,FT-	S.N.A
...3		AA61-10162A	BRACKET-IC;-,SBHG-1,T1.0,-,-,-,-	
...3		6003-000334	SCREW-TAPTITE;RH,+,2S,M3,L6,ZPC(YEL),SWR	S.N.A
...3		1204-001541	IC-VERTICAL DEF.;TDA8356/N6A,SIP,9P,-,PL	
...3		0205-000129	GREASE-SILICON;SC102,JAPAN	S.N.A
..2	IC601	1201-001386	IC-POWER AMP;7267,DIP,16P,-,DUAL,32dB,PL	
⚠ ..2	IC801S	AA96-50298C	ASSY-H/S;-,POWER,AA62-30171A,KA3S0680,C	S.N.A
...3		AA63-30189A	COVER-HEATSINK;-,-,AA62-30171,PC-ABS,V0,	
...3		AA62-30171A	HEAT SINK-ES;-,A6063 EXTR,-,-,-,WHT,40(3	
...3		AA61-10386A	BRACKET-IC;-,SECC 100,T1.0,-,-,-,KA2S068	S.N.A
...3		6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	S.N.A
...3		1203-001313	IC-PWM CONTROLLER;3S0680,TO-3P,5,150MIL,	
...3		0205-000129	GREASE-SILICON;SC102,JAPAN	S.N.A
..2	IC804	AA96-50407B	ASSY H/S;-,VERTICAL,AA62-30154G,KA7806,	S.N.A
...3		0205-000129	GREASE-SILICON;SC102,JAPAN	S.N.A
...3		1203-000284	IC-POSI.FIXED REG.;7806,TO-220,3P,-,PLAS	
...3		6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	S.N.A
...3		AA62-30154G	HEAT SINK-ES;-,A6063 EXTR,-,WHT,50/16,-,	S.N.A
..2	IC806	AA96-50153H	ASSY-H/S;-,-,AA62-30013D,KA78R09,-	S.N.A
...3		1203-001225	IC-POSI.FIXED REG.;78R09,TO-220,4P,-,PLA	
...3		6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	S.N.A
...3		AA62-30013D	HEAT SINK-ES;-,A6063 EXTR,-,-,55(21) T02	S.N.A
..2	IC903	1203-001752	IC-POSI.FIXED REG.;LF33CV,TO-220,3P,-,PL	
..2	JS701	3722-000161	JACK-PIN;2P,3.4mm,SN,BLK,-	
..2	L803	AA27-20003U	COIL-DEGAUSSING;-,14,16.4ohm,75T,890mm,D	
⚠ ..2	LR401S	AA27-30001K	COIL-LINEARLITY;-,230uH,DR1215,PI0.5,14.	
⚠ ..2	LX801S	AA29-30001C	FILTER-LINE NOISE;-,39mH,1.0A,-,-	
⚠ ..2	T444S	AA26-00004A	TRANS-FLYBACK;-,FSA38026S,14INCH,125V	
⚠ ..2	T801S	AA26-20007U	TRANS-SWITCHING;-,90~260V,125V/16.5V/9.5	
⚠ ..2	TU01S	AA40-10006M	TUNER-F/S;TECC2949PG29A(S),PAL-B/G,TR,18	
..2		AA99-30224S	ASSY-PCB ROBOT; AA94-02669C ,ER	S.N.A
...3	CN101	3711-003641	CONNECTOR-HEADER;BOX,12P,1R,2.5mm,STRAIG	
...3	CN102	3711-003641	CONNECTOR-HEADER;BOX,12P,1R,2.5mm,STRAIG	
⚠ ...3	CX801S	2306-000318	C-FILM,MPPF;220nF,20%,250V,TP,-,22.5mm	
⚠ ...3	CX802S	2306-000318	C-FILM,MPPF;220nF,20%,250V,TP,-,22.5mm	
⚠ ...3	CY801S	2201-000987	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,TP,12.	
⚠ ...3	CY802S	2201-000987	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,TP,12.	
...3	D818	AA96-00111C	ASSY-H/S;-,-,AA62-30013L,FML-G12S,-	
....4		0402-000233	DIODE-RECTIFIER;FML-G12S,200V,5A,-,-	
....4		6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	S.N.A
....4		AA62-30013L	HEATSINK-ES;-,-,-,-,44/22,-,WHT,-,-,-,-	S.N.A
...3	D820	0402-000233	DIODE-RECTIFIER;FML-G12S,200V,5A,-,-	
⚠ ...3	FP801S	3601-000261	FUSE-CARTRIDGE;250V,3.15A,TIME-LAG,GLASS	
⚠ ...3	IC201S	1204-001440	IC-VIDEO SYSTEM;TDA8842,DIP,56P,300MIL,P	
...3	IC701	0801-000961	IC-CMOS LOGIC;4053,MUTIPLEXER,DIP,16P,30	
...3	IC702	0801-000213	IC-CMOS LOGIC;4052,MULTIPLEXER,DIP,16P,3	
⚠ ...3	IC901S	AA09-00088A	IC MICOM;SAA5543PS/M4-0258,C15C,52P,3.3	
⚠ ...3	IC902S	1103-000118	IC-EEPROM;24WC08,1Kx8Bit,DIP,8P,300MIL,1	
⚠ ...3	NT801S	1404-001045	THERMISTOR-NTC;4.7ohm,15%,2900K,35.0mW,T	
⚠ ...3	PC801S	0604-001038	PHOTO-COUPLER;TR,130-260%,200mW,DIP-4,ST	
⚠ ...3	PT801S	1404-000002	THERMISTOR-PTC;9ohm,20%,-,-,TR,RECT,-	
...3	Q401	0502-001115	TR-POWER;KSC5386,NPN,50W,TO-3PF,ST,8-	
⚠ ...3	RL801S	3501-001040	RELAY-POWER;12VDC,500mW,10A,1FormA,15mS,	
⚠ ...3	SF101S	2904-001239	FILTER-SAW AV;38.9MHz,SIP5K,ST,16.3dB,B/	
...3	T401	AA26-50001B	TRANS-HORIZ.DRIVE;-,7.1mH,102uH,10-20uH,	
...3		AA99-10218N	ASSY-PCB MAIN,AUTO; AA99-30224S ,V	S.N.A

....4	C101	2401-000030	C-AL;22uF,20%,25V,GP,TP,5x11,5
....4	C102	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V
....4	C107	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V
....4	C108	2401-000962	C-AL;22uF,20%,50V,GP,TP,5x11,5
....4	C109	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP
....4	C112	2305-000196	C-FILM,MPEF;150nF,5%,63V,TP,-,5mm
....4	C201	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5
....4	C202	2305-000412	C-FILM,MPEF;470nF,5%,63V,TP,-,5mm
....4	C204	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5
....4	C205	2401-000660	C-AL;2.2uF,20%,50V,GP,TP,5x11,5
....4	C206	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m
....4	C207	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5
....4	C208	2305-000412	C-FILM,MPEF;470nF,5%,63V,TP,-,5mm
....4	C209	2305-000289	C-FILM,MPEF;220nF,5%,63V,TP,-,5mm
....4	C210	2305-000412	C-FILM,MPEF;470nF,5%,63V,TP,-,5mm
....4	C211	2301-000232	C-FILM,PEF;3.3nF,5%,50V,TP,8.1x4.5x13mm,
....4	C212	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m
....4	C213	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m
....4	C214	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m
....4	C215	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5
....4	C219	2201-000273	C-CERAMIC,DISC;0.018nF,5%,50V,NP0,TP,5x3
....4	C221	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m
....4	C222	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5
....4	C225	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5
....4	C226	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5
....4	C227	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3
....4	C228	2309-000138	C-FILM,PE-PPF;100nF,5%,50V,TP,20x16x8.5,
....4	C230	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5
....4	C231	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5
....4	C232	2202-000849	C-CERAMIC,MLC-AXIAL;18pF,5%,50V,CH,TP,3.
....4	C233	2202-000243	C-CERAMIC,MLC-AXIAL;33pF,5%,50V,SL,TP,3.
....4	C234	2301-000445	C-FILM,PEF;4.7nF,5%,50V,TP,5.5x7x3mm,5mm
....4	C236	2301-000232	C-FILM,PEF;3.3nF,5%,50V,TP,8.1x4.5x13mm,
....4	C238	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm
....4	C239	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5
....4	C249	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5
....4	C250	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m
....4	C251	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m
....4	C253	2202-000210	C-CERAMIC,MLC-AXIAL;270PF,10%,50V,Y5P,TP
....4	C254	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V
....4	C255	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5
....4	C257	2202-000791	C-CERAMIC,MLC-AXIAL;150pF,10%,50V,Y5P,TP
....4	C260	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP
....4	C261	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm
....4	C262	2202-000210	C-CERAMIC,MLC-AXIAL;270PF,10%,50V,Y5P,TP
....4	C265	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5
....4	C301	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3
....4	C302	2401-002293	C-AL;68uF,20%,100V,WT,TP,10x20,5
....4	C303	2305-000149	C-FILM,MPEF;100nF,5%,100V,TP,12x12.5x6.5
....4	C304	2305-000285	C-FILM,MPEF;220NF,5%,100V,TP,10.5X5.5X15
....4	C305	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3
....4	C306	2401-002288	C-AL;470uF,20%,25V,WT,TP,10x20,5
....4	C307	2305-000285	C-FILM,MPEF;220NF,5%,100V,TP,10.5X5.5X15
....4	C308	2305-000407	C-FILM,MPEF;470nF,5%,100V,TP,-,5mm
....4	C401	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm
....4	C405	2305-000704	C-FILM,MPEF;100nF,5%,250V,TP,16.5x10.3x5
....4	C406	2201-000556	C-CERAMIC,DISC;0.47nF,10%,500V,Y5P,TP,5.
....4	C407	2401-002288	C-AL;470uF,20%,25V,WT,TP,10x20,5
....4	C408	2201-000556	C-CERAMIC,DISC;0.47nF,10%,500V,Y5P,TP,5.
....4	C409	2401-001661	C-AL;68uF,20%,100V,GP,TP,10x16,5
....4	C411	2201-000556	C-CERAMIC,DISC;0.47nF,10%,500V,Y5P,TP,5.
....4	C412	2401-000927	C-AL;22uF,20%,250V,GP,TP,13x20,5
....4	C413	2401-003028	C-AL;100uF,20%,25V,WT,TP,6.3x11,5
....4	C414	2201-000639	C-CERAMIC,DISC;0.68nF,10%,2kV,Y5P,TP,9x5
....4	C415	2305-000382	C-FILM,MPEF;4.7nF,5%,400V,TP,-,5mm
....4	C601	2401-001998	C-AL;1000uF,20%,25V,GP,TP,10x20,5mm
....4	C602	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m
....4	C604	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5

9. Block Diagrams

9-1 C15C Video Block Diagram

9-1-1 Notes

The TV's 1st and 2nd tuners (and VCR module) are "multi-system." compatible: IC201 (TDA8842/8841) is the video, chroma, and deflection (VCD) IC .

9-1-1(A) TAPE PLAYBACK (REGARDLESS OF ORIGINAL RECORDING SYSTEM)

If the output PB signal of micom pin 6 is high, the PB signal outputs from module deck 2, passes through IC 702 pins 2 and 3 and out to another VCR . The output signal of IC701 pin 1 (pin 15) outputs from IC201S pin 17 .

9-1-1(B) VIEWING NORMAL CHANNEL WHILE RECORDING A SCRAMBLED CHANNEL:

The output CVBS (Composite Video Signal) of the 2nd IF outputs to IC702pin 3 when the micom's pin 7 V/T/H (VCR tuner high) is high . The decoded signal goes to IC701 pin 2, where it is fed to IC 701 pin 4 (high output of micom's' pin 8— AV/Tuner), and out to VCR pin 4 (module deck) for recording.

9-1-1(C) VIEWING A SCRAMBLED CHANNEL WHILE RECORDING AN UNSCRAMBLED CHANNEL.

The output CVBS of the 2nd IF is fed from IC701 pin 5 to IC701 pin 4 (low output of micom pin 8—AV/tuner). Then it goes to the module deck pin 4 for recording.

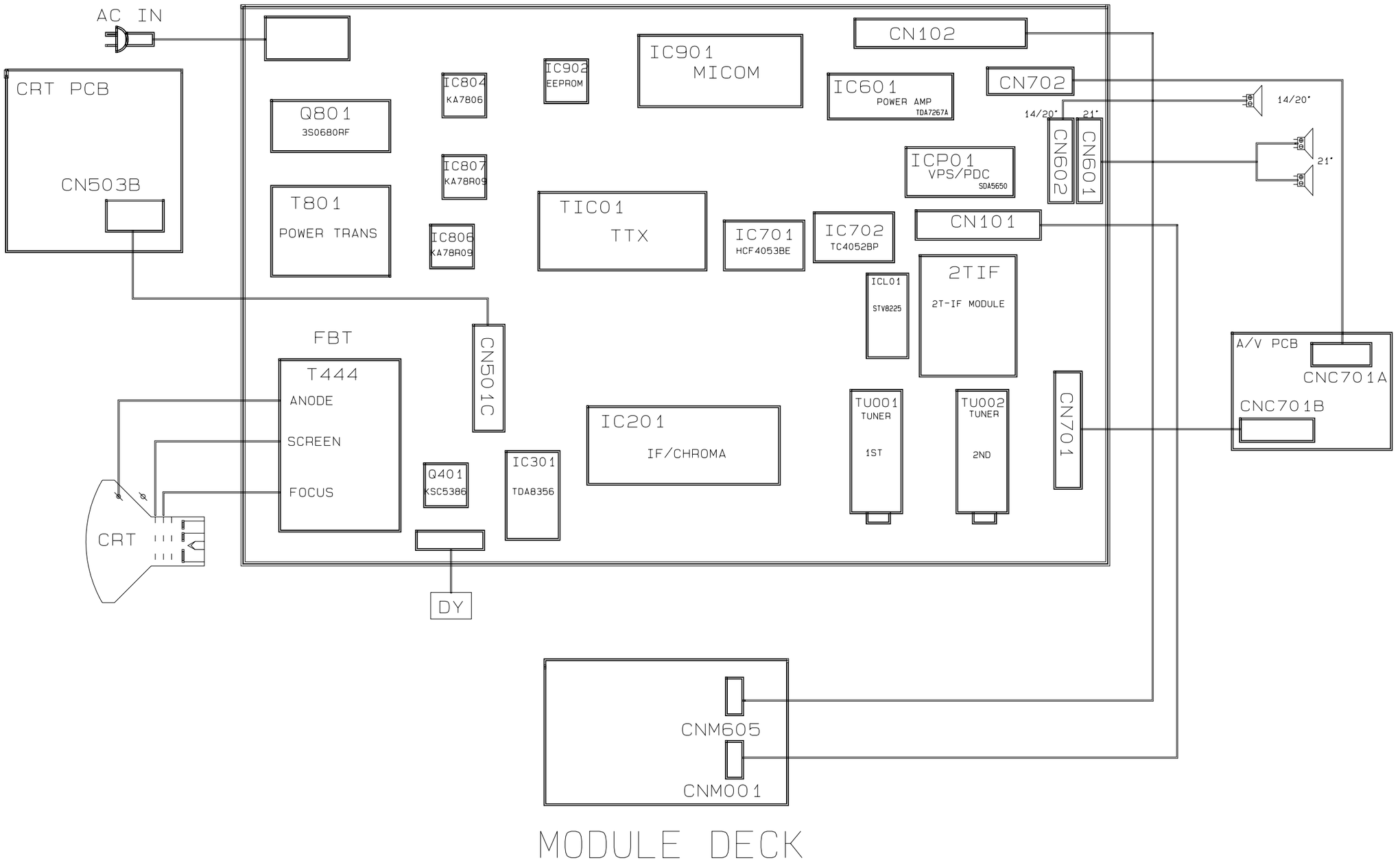
The scrambled signal (CVBS) is fed to IC702 pin 1 through the 1st IF, and then to IC702 pin 3 (micom's pin 7, V/T/H registers low). Then it goes to the decoder input. The descrambled signal goes to IC701 pins 2 and 15 (PH high output of micom's pin 6), and then to IC201S pin 17, where it outputs as RGB.

9-1-1(D) SYNCHRONOUS RECORDING:

The viewer sees the signal from the 1st tuner , while the signal from the second tuner is recorded. Audio processing for the French system type is shown in the table.

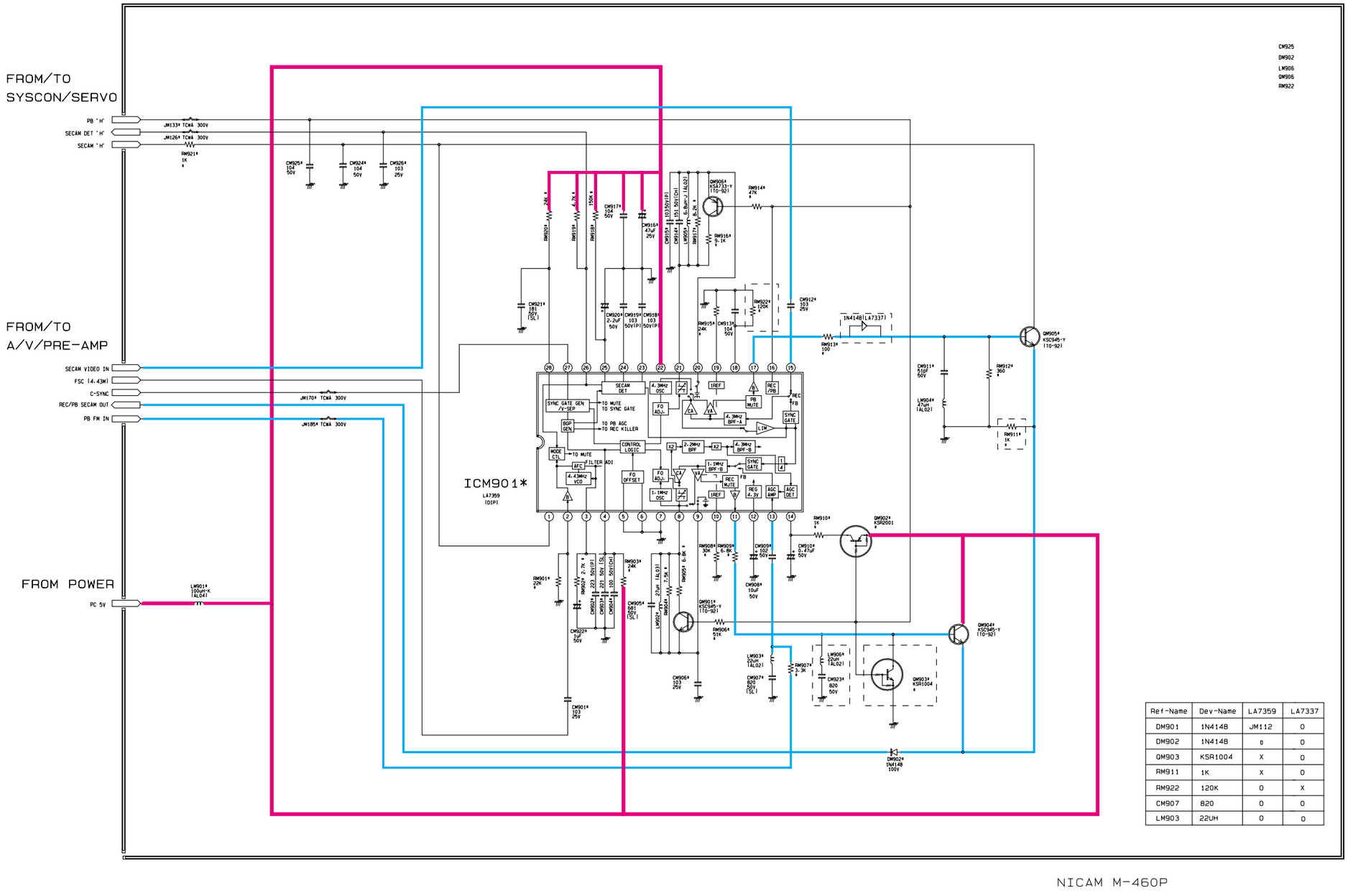
10. Wiring Diagram

10-1 C15C Wiring Diagram



11. Schematic Diagrams

11-1 VCR (SECAM BLOCK)

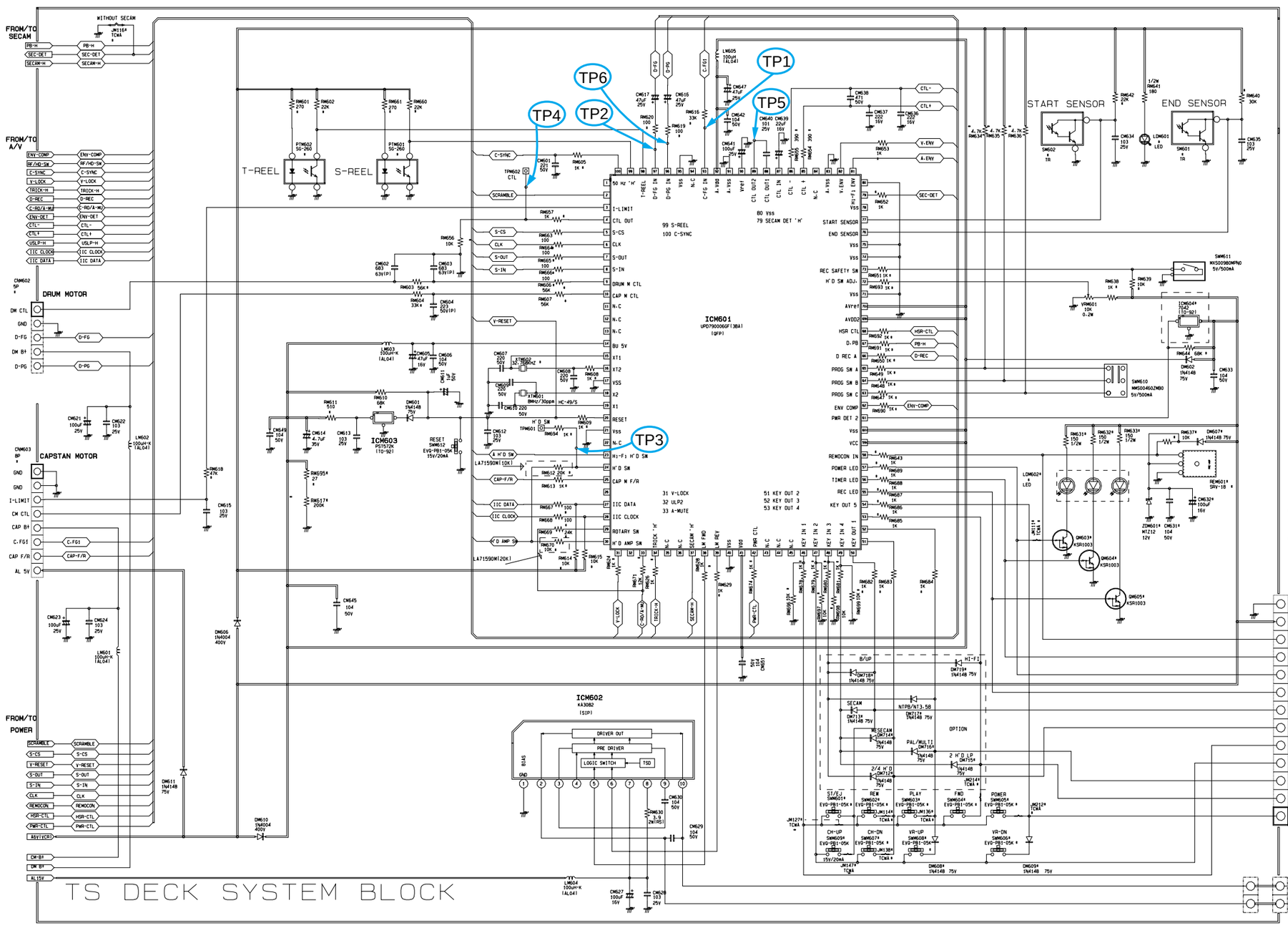


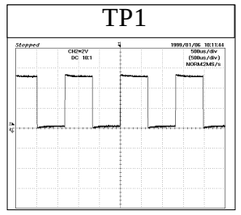
Ref-Name	Dev-Name	LA7359	LA7337
DM901	1N414B	JM112	O
DM902	1N414B	O	O
QM903	KSR1004	X	O
RM911	1K	X	O
RM922	120K	O	X
CM907	820	O	O
LM903	22UH	O	O

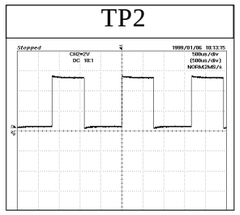
: Power Line
: Signal Line

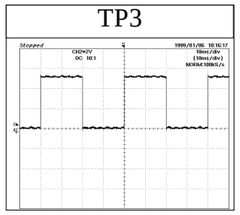
NICAM M-460P

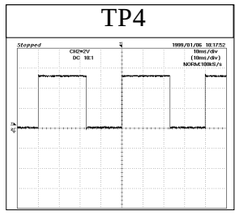
11-2 VCR (SYSTEM BLOCK)

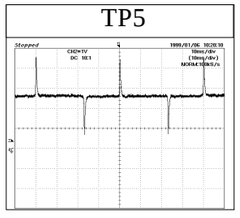


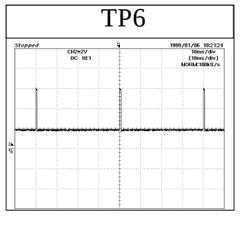




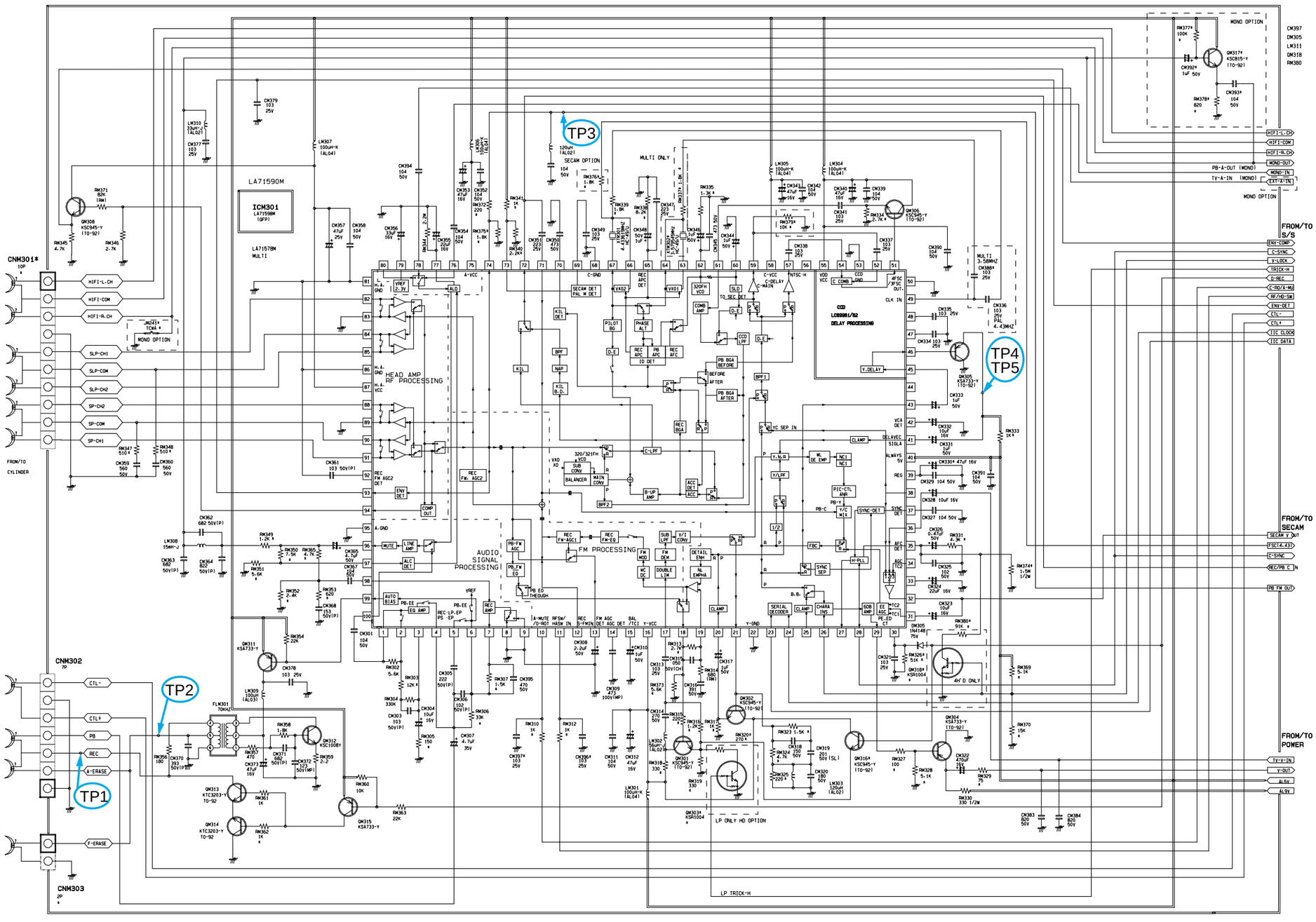




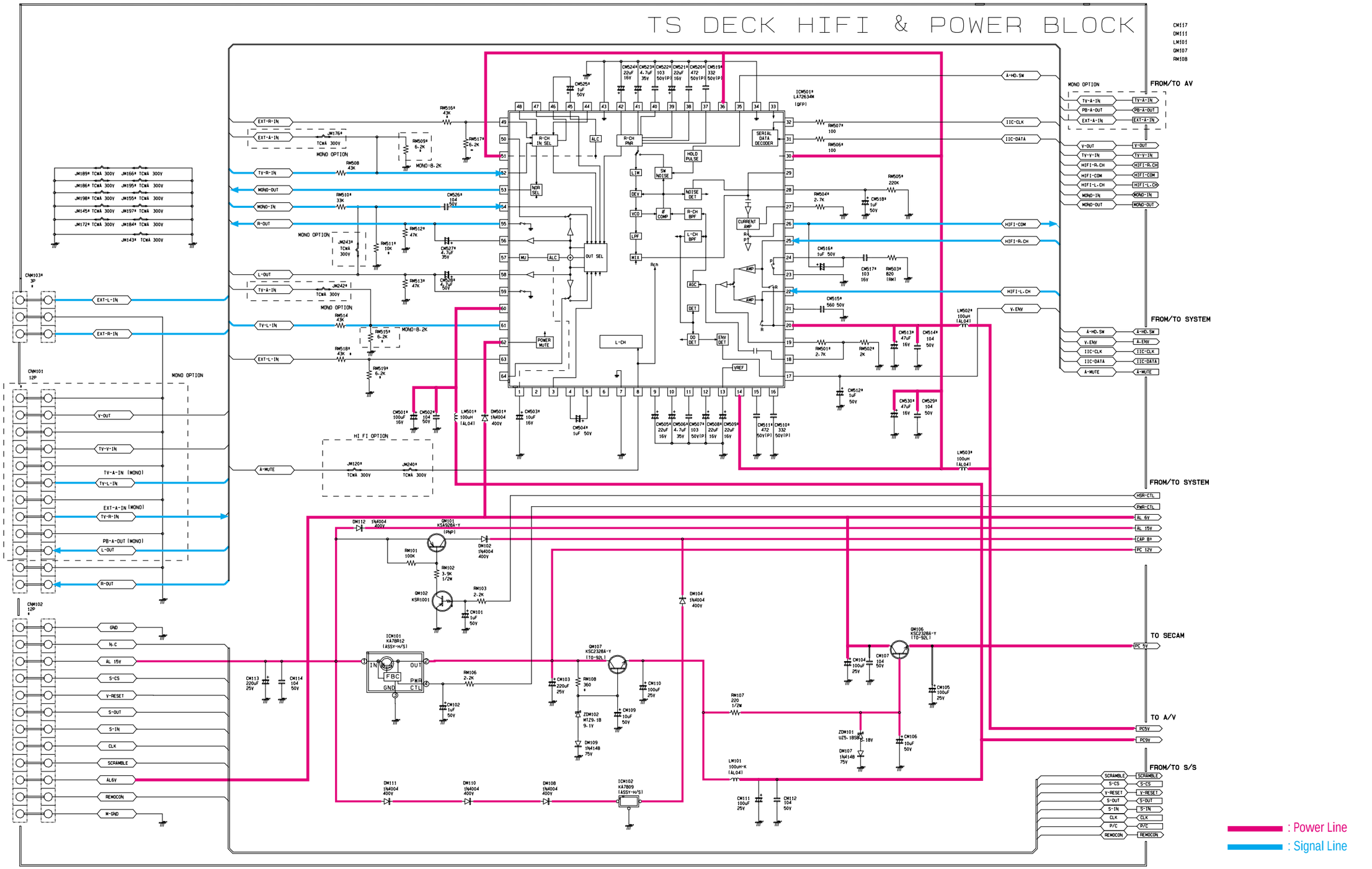




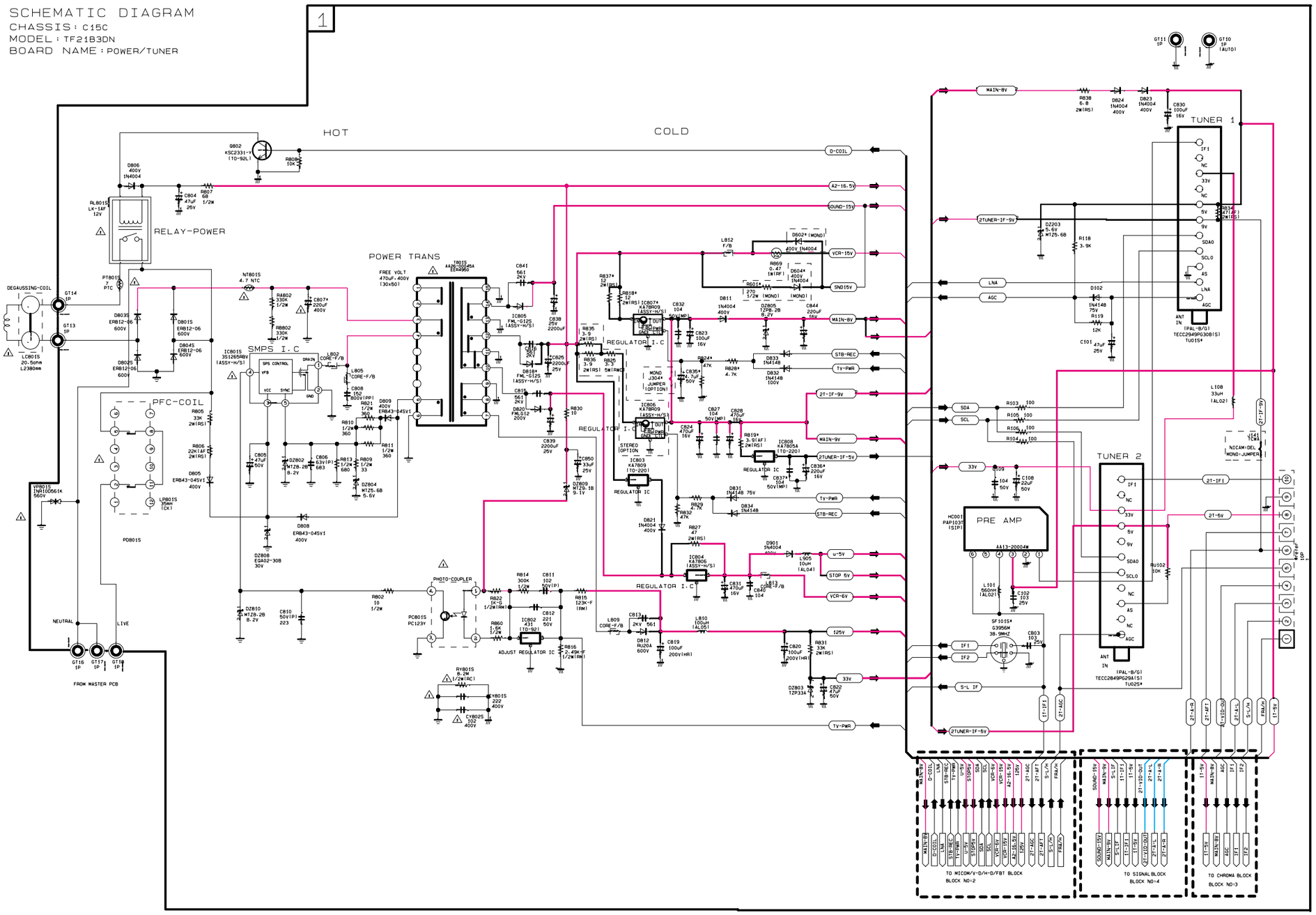
11-3 VCR (A/V BLOCK)

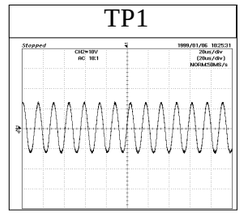


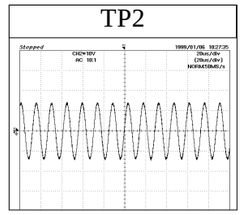
11-4 VCR (POWER BLOCK)

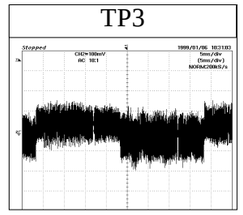


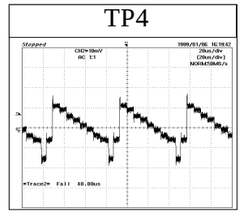
11-5 TV MAIN (1/4)

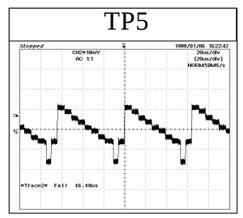




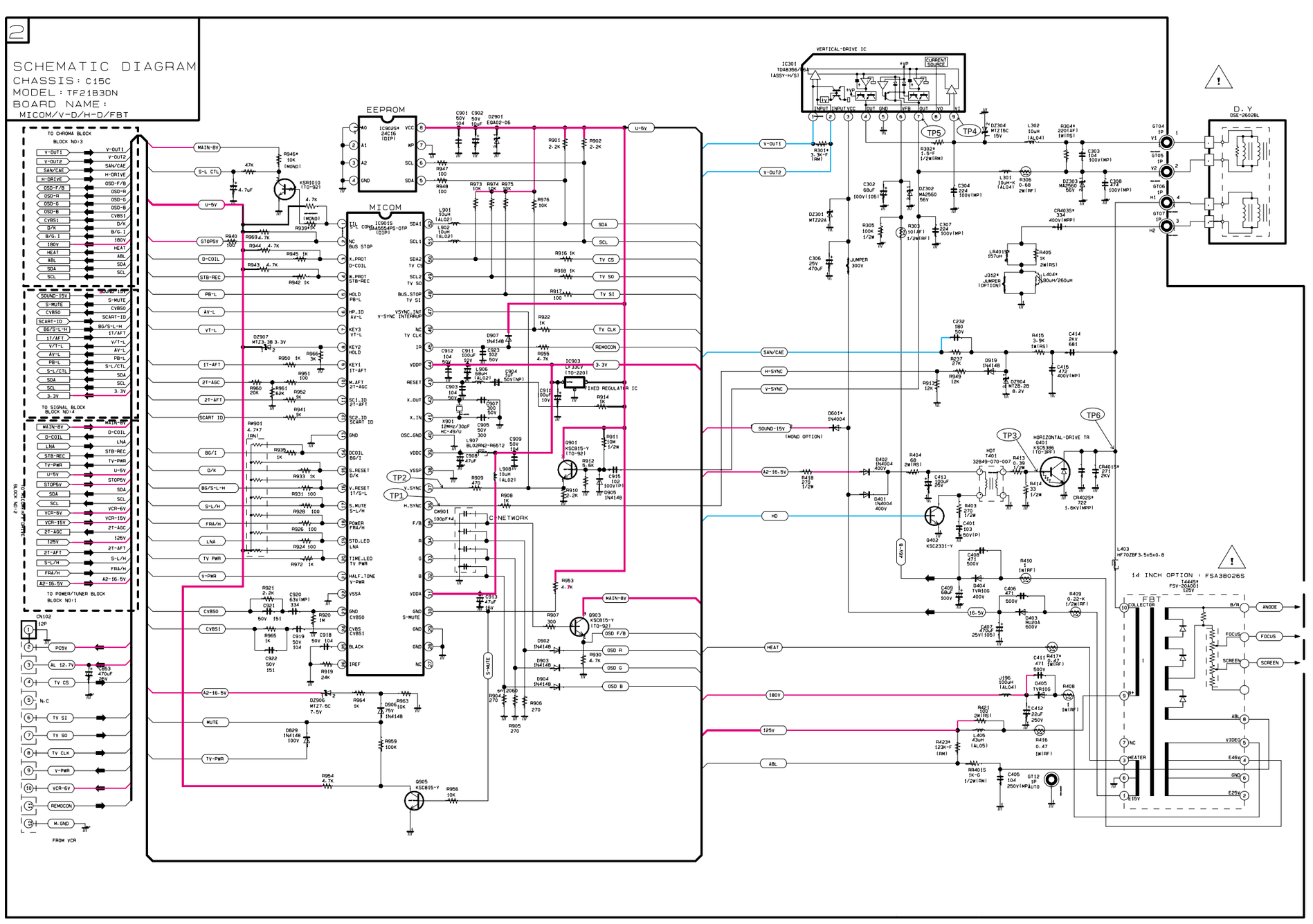








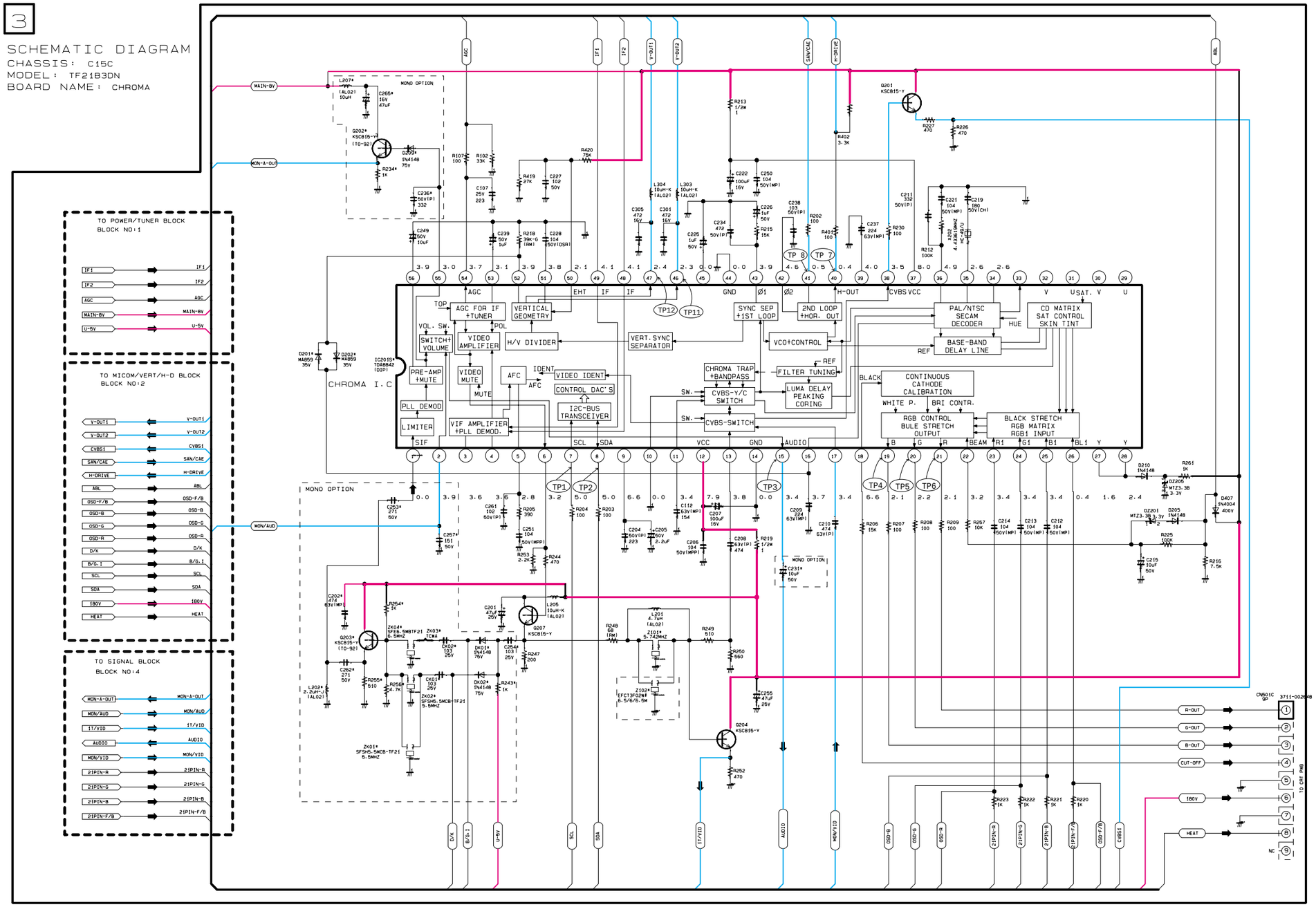
11-6 TV MAIN (2/4)



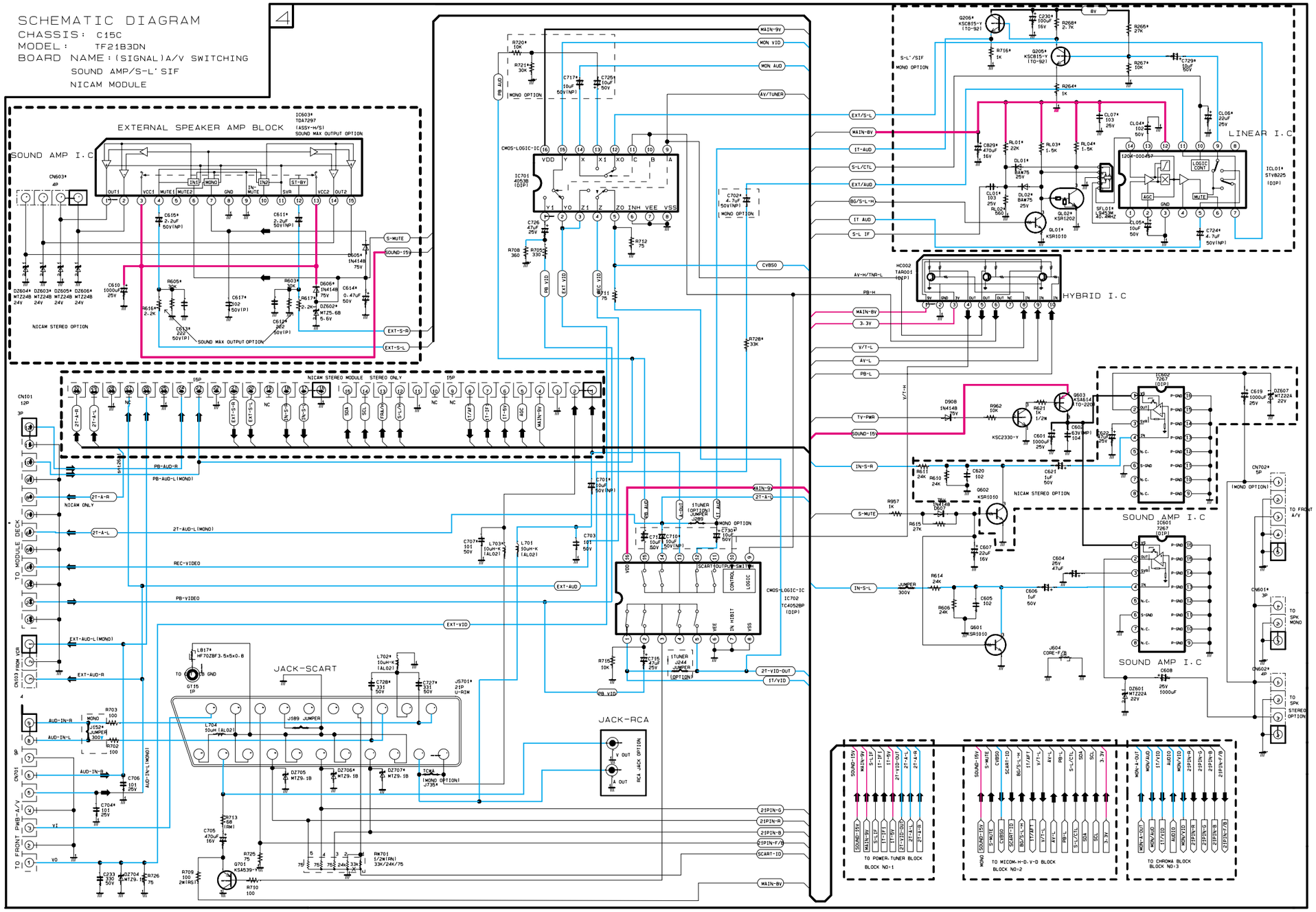
11-7 TV MAIN (3/4)

3

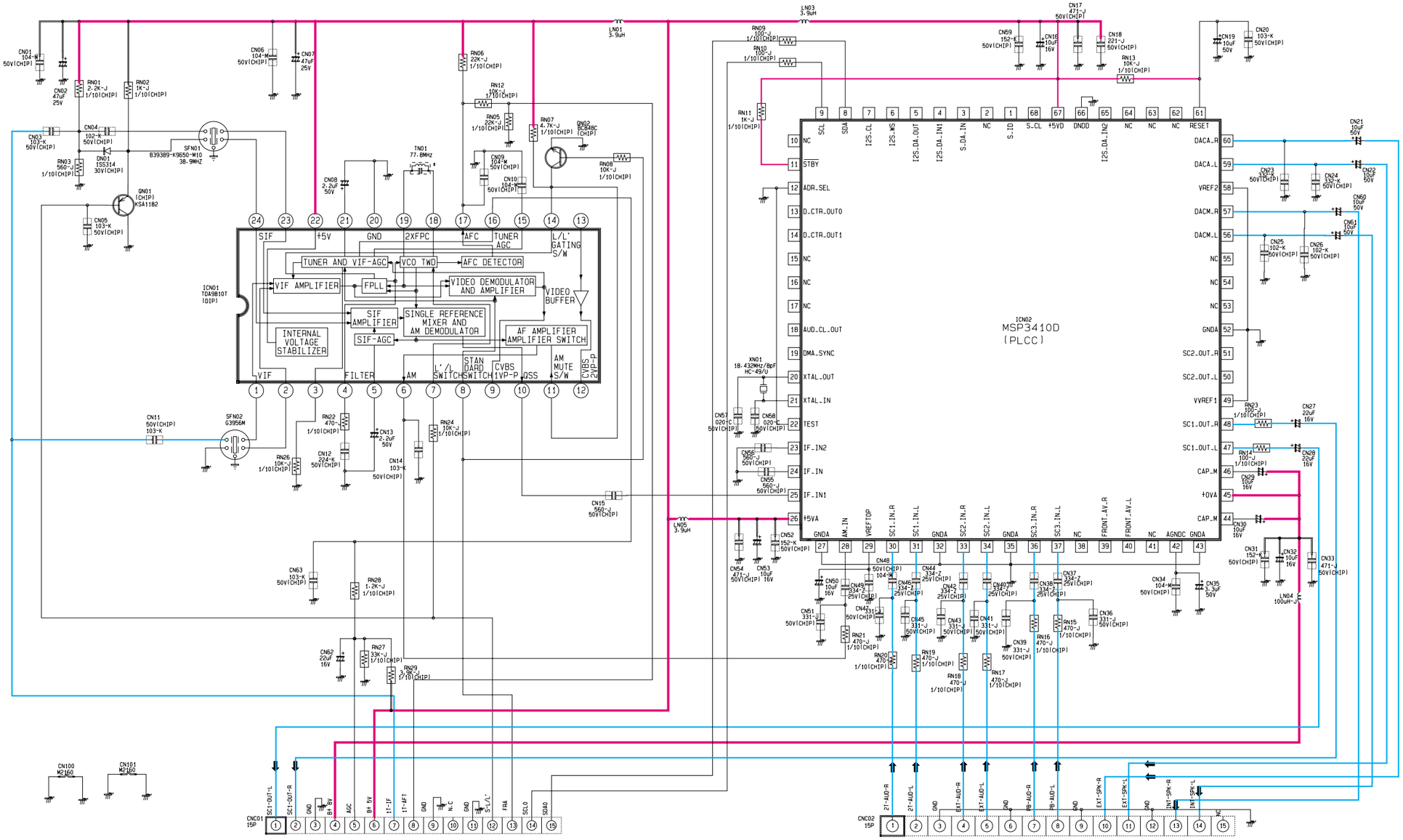
SCHEMATIC DIAGRAM
CHASSIS : C15C
MODEL : TF21B3DN
BOARD NAME : CHROMA



11-8 TV MAIN (4/4)

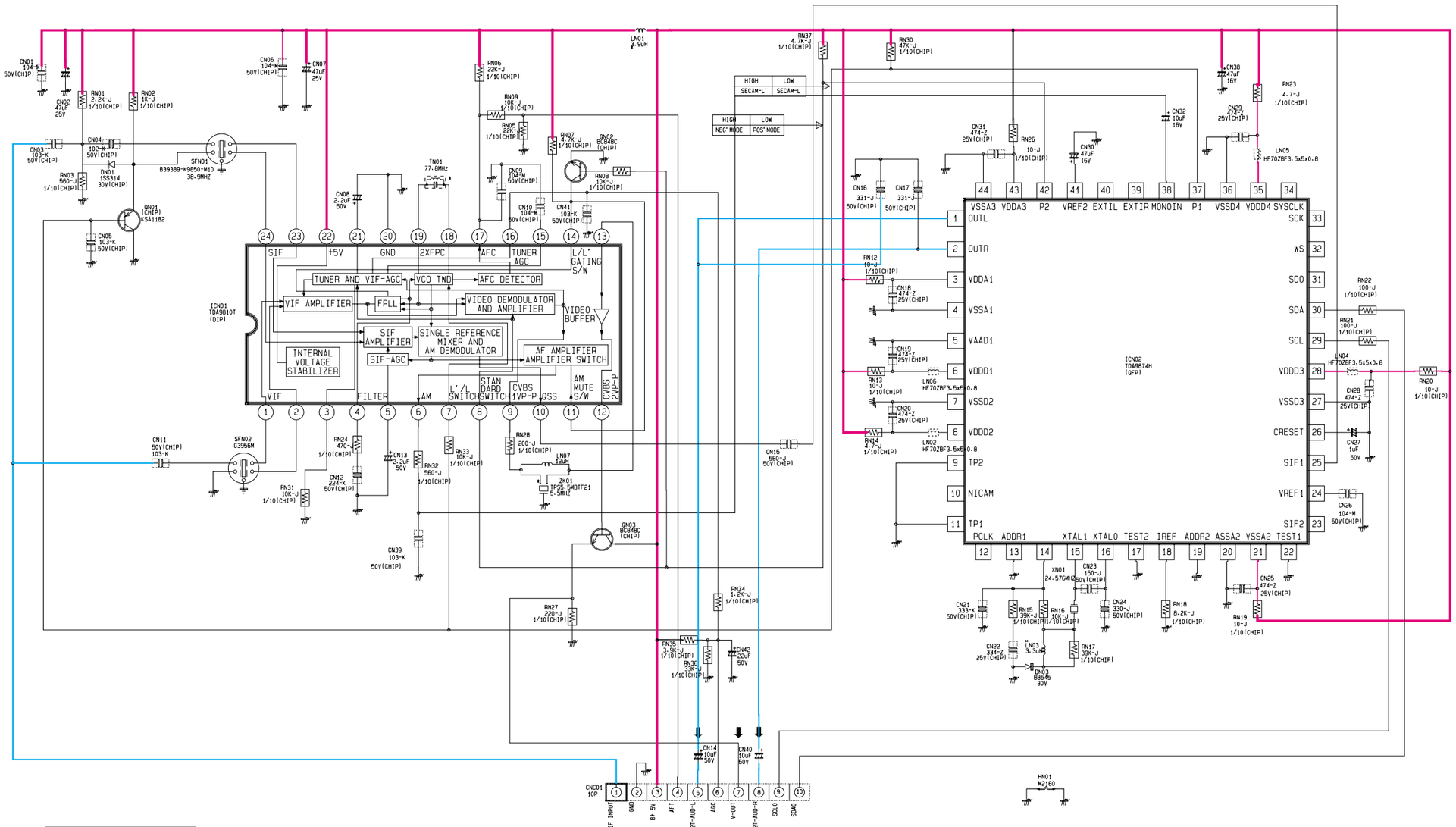


11-9 TUNER-IF NICAM(STEREO)



: Power Line
: Signal Line

11-10 2'nd IF(STEREO)



CAPACITOR	
Ceramic - SL	No Mark
Ceramic - RH	(RH)
Ceramic - CH	(CH)
Polyester(Induct)	(P)
Polyester(Noninduct)	(PMU)
Polypropylene	(PP)
Metal Polyester	(MP)
M.P.Polypropylene	(MPP)
Tantalium	(T)
Non Polar	(NP)

RESISTOR	
Carbon	No Mark
Composition	(RC)
Metal Oxide	(RS)
Metal Film	(RM)
Fusible	(RF)
Cement-Wire	(RW)
Network	(RN)

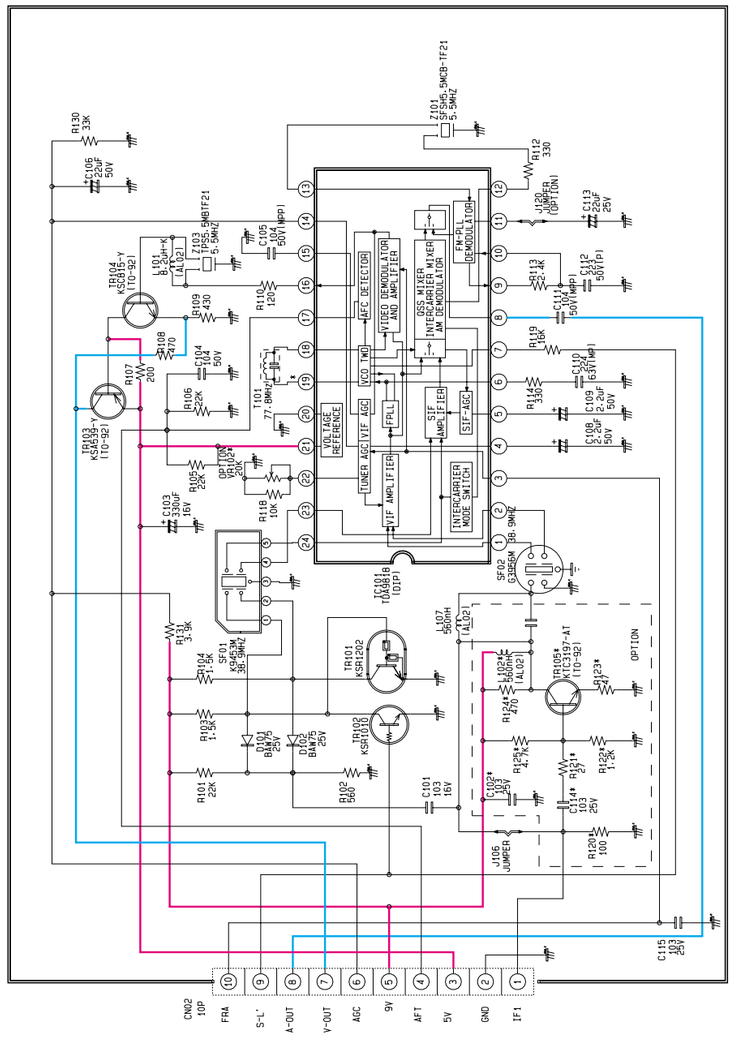
EXPRESSION

1 Resistance is shown ohm K=1.000 M=1.000.000
2 Unless otherwise noted in schematic all capacitor values less than 1 are expressed in ufd. the values more than 1 in pF.
3 Unless otherwise noted in schematic all inductor values areexpressed in uH.and the values less than 1 in mH.

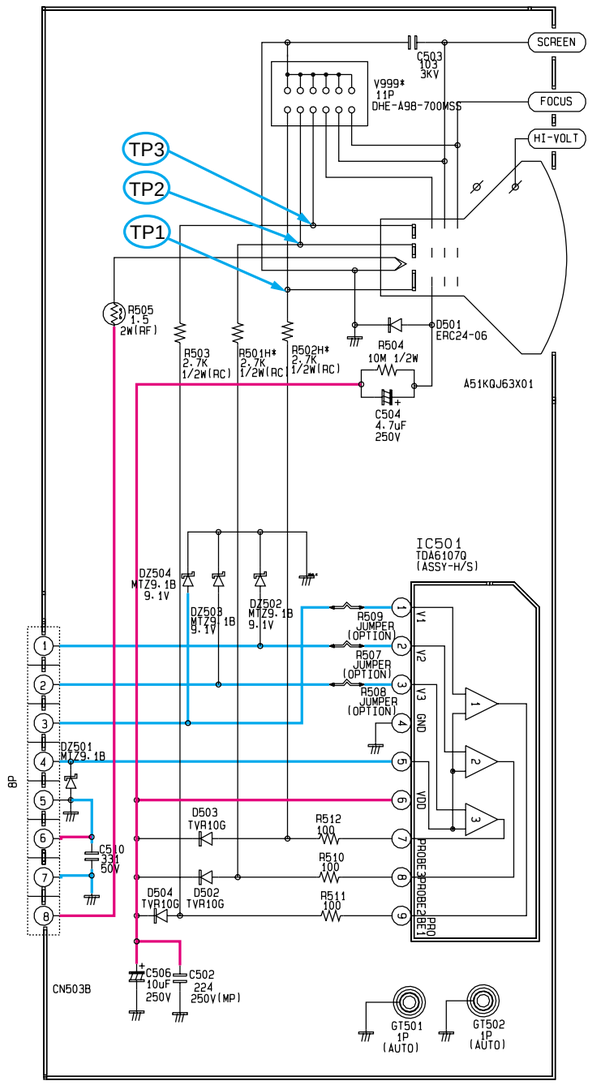
NOTE

The circuits are subject to change without notice to improve the picture quality.

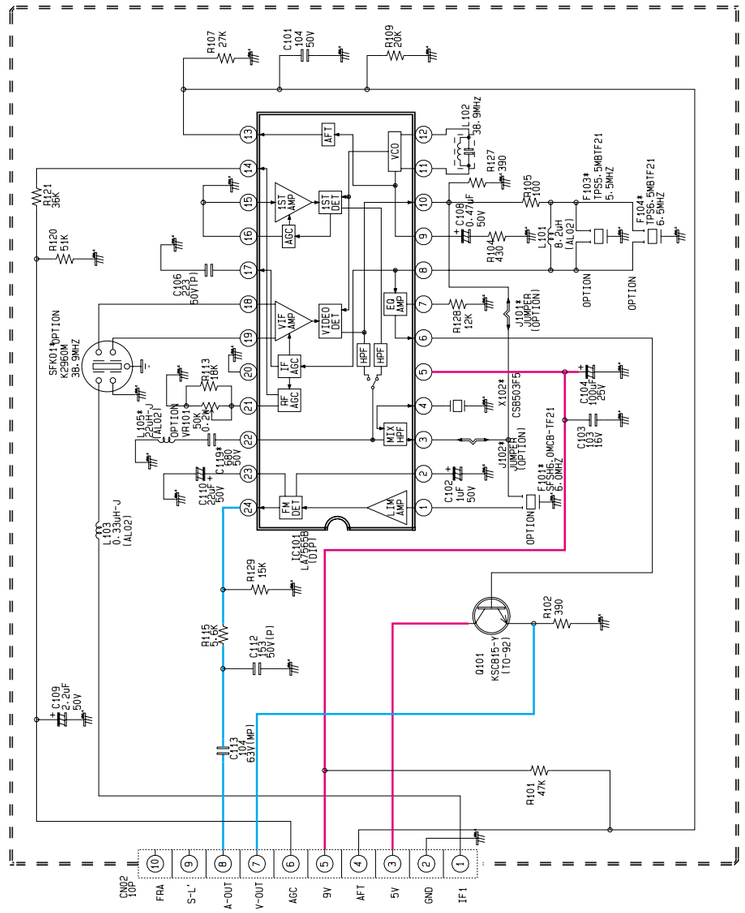
11-11 IF (MONO)

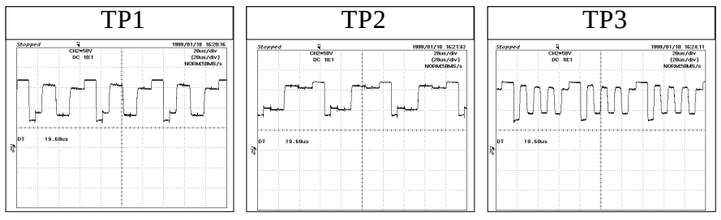


11-12 CRT



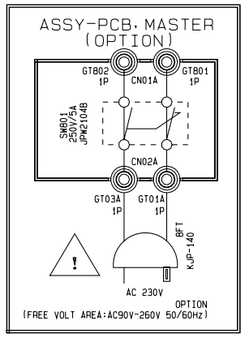
11-13 2'nd IF PAL/SECAM-B/G, D/K, I OPTION (MONO)



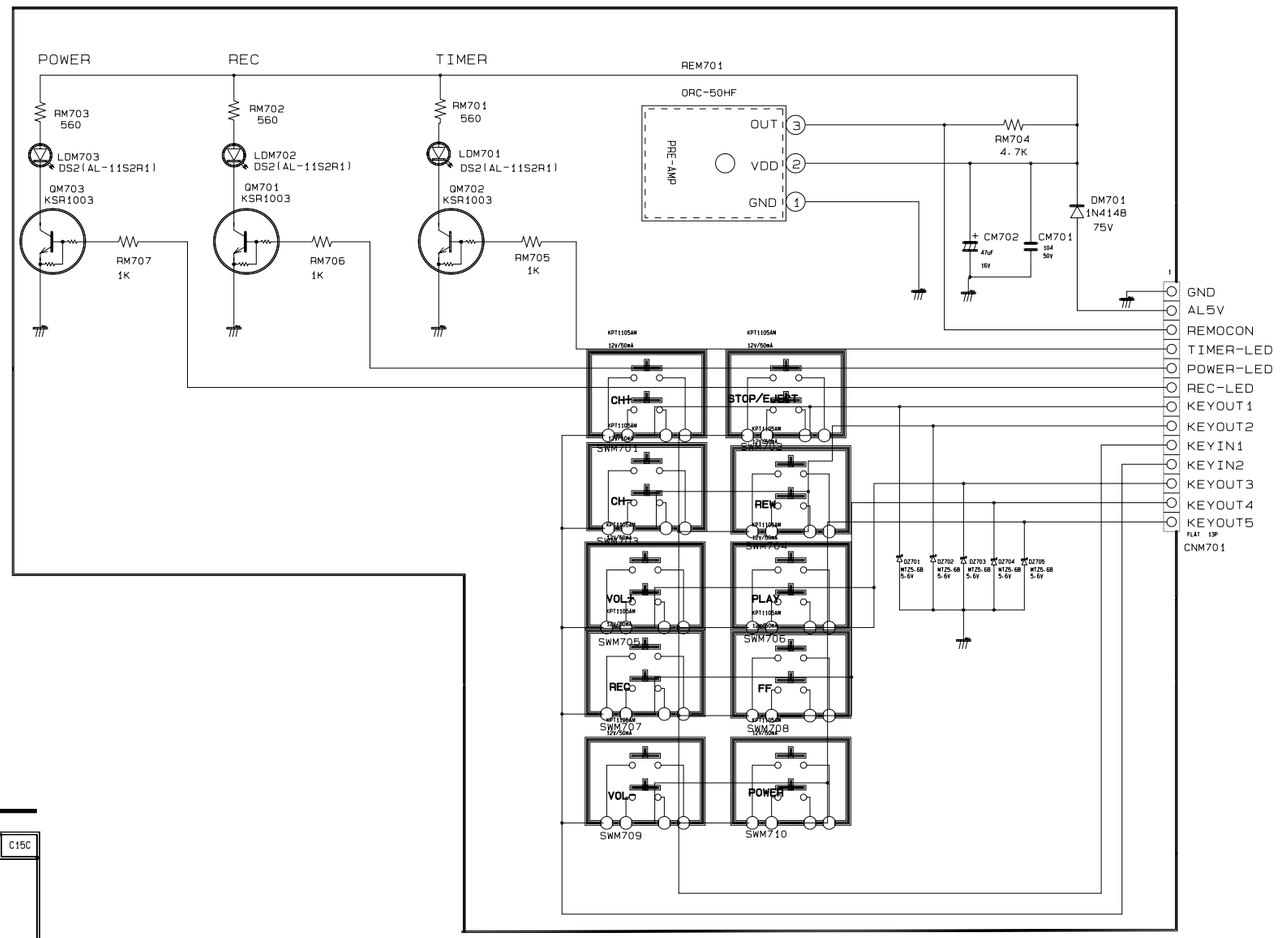


: Power Line
: Signal Line

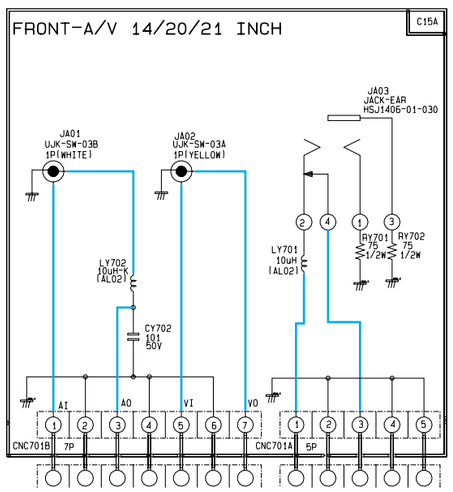
11-14 MASTER



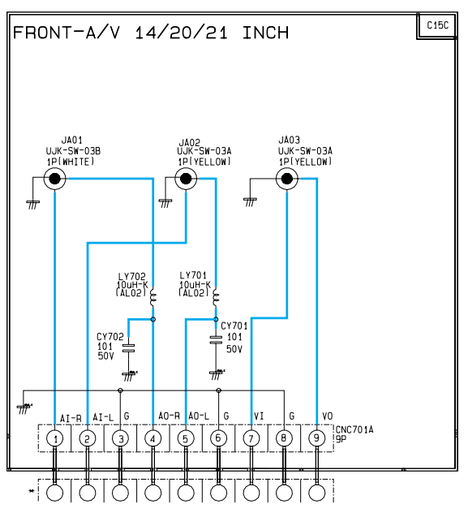
11-15 CONTROL



11-16 FRONT-A/V (MONO)



11-17 FRONT-A/V (STEREO)



: Power Line
: Signal Line

11-18 Voltages (VTR)

ICM301

	PLAY	REC	STOP
1	2.5	2.5	2.5
2	2.5	2.5	2.5
3	2.5	2.5	2.5
4	2.5	2.5	2.5
5	2.5	2.5	0
6	2.5	2.5	2.5
7	2.5	2.5	2.5
8	0	0	0
9	0	0	0
10	1.6	1.6	2
11	3.2	3.2	3.2
12	5	2	2.5
13	1.5	1.5	2
14	1.5	1.5	1.6
15	2.2	2.2	2.2
16	5	5	5
17	3	0	0
18	1.8	2.1	2.2
19	2.1	2.1	2.2
20	2.8	2.8	3.2
21	2.1	2.1	2.5
22	0	0	0
23	5	5	5
24	5	5	5
25	1.8	1.8	2.8
26	0.8	0	1
27	4.1	4.1	4.1
28	4.1	4.1	4.1
29	0.8	0.8	3
30	1	0	1
31	2.1	2.1	3.5
32	1.8	1.8	2
33	2	2	1.5
34	1.8	1.8	1.8
35	3.5	3.5	3.5
36	1.8	1.8	2
37	4.9	4.9	5
38	1.8	1.8	1.8
39	4	4	4
40	5	5	5
41	2.7	2.7	3
42	3	3	3.2
43	1.9	1.9	2
44	4.3	4.3	0
45	1.8	1.8	2
46	1.5	1.4	1.5
47	2	2	9
48	2.3	2.3	2.2
49	1.2	1.2	1
50	0	0	0
51	1.9	1.9	0
52	2.4	2.4	2.5
53	0	0	0
54	2.4	2.4	2.5
55	5	5	5
56	3.5	3.5	0
57	3.4	3.4	3.5
58	5	5	5
59	3.4	3.4	3.5
60	3.5	3.5	3.5
61	3.3	3.3	3.5
62	3.5	3.5	3.5
63	4	4	0
64	2.2	2.2	0
65	2.4	2.4	2.2
66	2.5	2.5	3
67	4	4	4
68	0	0	0
69	0.7	0.7	0.7
70	2	2	2
71	2.5	2.5	2.5
72	0.3	2.5	3
73	2.5	2.5	3.5
74	2	0	2
75	5	5	5
76	2.5	2.5	2.5
77	0	0	0
78	2.5	2.5	0
79	2.5	2.5	2.5
80	2.5	5	2.5
81	0	0	0
82	1.8	4.1	1
83	0	0	0
84	1.8	4.1	1
85	1.8	4.1	1
86	0	0	0
87	5	5	5
88	1.8	4.1	2
89	0	0	0
90	1.8	4.1	2
91	1.8	4.1	2
92	4	1.6	0
93	4	4.0	0
94	0.5	0.7	0
95	0	0	0
96	2.5	2.5	2.5
97	0	0	0
98	2.5	2.5	2.5
99	5	4.3	5
100	2.5	2.5	2.5

ICM601

	PLAY	REC	STOP
1	5	5	5
2	0	0	0
3	5	5	5
4	5	5	5
5	5	5	5
6	5	5	5
7	5	5	5
8	5	5	5
9	5	5	0
10	5	5	0
11	0	0	0
12	0	0	0
13	0	0	0
14	5	5	5
15	3.5	3.5	3.5
16	4.5	4.5	4.5
17	0	0	0
18	4.5	4.5	4.5
19	3.5	3.5	3.5
20	5	5	5
21	0	0	0
22	0	0	0
23	5	5	0
24	5	5	0
25	5	5	0
26	0	0	0
27	5	5	5
28	5	5	5
29	5	5	0
30	0	0	0
31	0	0	0
32	5	5	5
33	0	0	0
34	0	0	0
35	0	0	0
36	0	0	0
37	0	0	0
38	5	5	5
39	5	5	5
40	0	0	0
41	5	5	5
42	5	5	5
43	5	5	5
44	5	5	5
45	0	0	0
46	0	0	0
47	0	0	0
48	5	5	5
49	5	5	5
50	5	5	5
51	5	5	5
52	5	5	5
53	5	5	5
54	5	5	5
55	0	5	0
56	0	0	0
57	0	0	0
58	5	5	5
59	5	5	5
60	5	5	5
61	5	5	5
62	0	0	0
63	0	0	0
64	5	5	5
65	0	0	0
66	0	5	0
67	5	0	0
68	0	0	0
69	5	5	5
70	5	5	5
71	0	0	0
72	1.8	1.8	1.8
73	0	0	0
74	0	0	0
75	0	0	0
76	0.7	0.7	0.7
77	0.7	0.7	0.7
78	0	0	0
79	0	0	0
80	0	0	0
81	3	0	0
82	4	0	0
83	0	0	0
84	0	0	0
85	2.5	5	2.5
86	2.5	5	2.5
87	2.5	2.5	2.5
88	2.5	2.5	2.5
89	2.5	2.5	2.5
90	2.5	2.5	2.5
91	0	0	0
92	5	5	5
93	5	5	5
94	0	5	0
95	0	0	0
96	5	5	5
97	5	5	5
98	5	5	0
99	5	5	0
100	5	5	5

ICM901

	PLAY	REC	STOP
1	4	0.8	0.8
2	2	2	2
3	4	4	4
4	3.5	3.5	3.5
5	0	0	0
6	0	0	0
7	0	0	0
8	2.5	2.5	2.5
9	2.5	2.5	2.5
10	2.5	2.5	2.5
11	2.5	2.5	2.5
12	4.5	4.5	4.5
13	2.5	2.5	2.5
14	2.5	4.7	4.5
15	3	2.5	2.5
16	5	1	1
17	2.5	2.5	2.5
18	2	2	2
19	2.5	2.5	2.5
20	2.5	2.5	2.5
21	2.5	2.5	2.5
22	5	5	5
23	3	3	3
24	3	3	3
25	4.1	3	3
26	5	0	0
27	4.1	4.1	4.1
28	3.1	3.1	3.1

ICM602

	PLAY	REC	STOP
1	0.9	0.9	0
2	2.6	2.6	0
3	5.2	5.2	5.2
4	2.6	2.6	2.6
5	2.6	2.6	2.6
6	2.6	2.6	2.6
7	5	5	0
8	5	5	0
9	12.5	12.5	13
10	0	0	0
11	5	5	5.1
12	5	5	5.1
13	0	0	0
14	0	0	0
15	0	0	0
16	8.4	8.8	0
17	8.4	8.8	0
18	8.4	8.8	0
19	5.2	5.2	0
20	0	0	0
21	12.5	12.5	13
22	8.4	8.2	0
23	8.4	8.2	0
24	8.4	8.2	0
25	1.8	1.8	2.6
26	1.8	1.8	0
27	1.4	1.4	1
28	2.4	2.5	2
27	5.2	5.2	0
28	0	0	0

11-19 Voltages (TV)

Q801 : KA3S0680RF

Units : Volts

PIN NO	PIN NAME	STAND-BY	POWER ON
1	DAR.IN	299	290
2	GND	-	-
3	VCC	19.5	20.3
4	VFB	0.2	1.3
5	SYNC	0.8	6.7

IC801 : PC123Y

Units : Volts

PIN NO	STAND-BY	POWER
1	16.5	16.7
2	15.4	15.7
3	GND	GND
4	0.2	1.3

IC501 : TDA6107Q

Units : Volts

PIN NO	PIN NAME	VOLTAGES(V)
1	B-IN	2.4
2	R-IN	2.4
3	G-IN	2.5
4	GND	-
5	Iom	5.4
6	Vdd	166
7	G-OUT	90~115
8	R-OUT	93~118
9	B-OUT	97~119

IC301 : TDA8356

Units : Volts

PIN NO	PIN NAME	VOLTAGES(V)
1	VD-INPUT	2.2
2	VD+INPUT	2.2
3	VCC	16.9
4	OUTPUT	8.2
5	GND	-
6	VFB	41.5
7	OUT	8.5
8	VO	-
9	VI	8.2

IC902 : 24C08,24C04,24C16

Units : Volts

PIN NO	PIN NAME	VOLTAGES(V)
1~4	GND	-
5	SDA	4.8
6	SCL	4.8
7	GND	-
8	VDD	5.2

IC601 : TDA7267A

Units : Volts

PIN NO	PIN NAME	VOLTAGES(V)
1	VS	1.6
2	OUT	8.5
3	SVR	8.7
4	IN	0.8
5	N.C	-
6	S-GND	-
7~8	N.C	-
9~16	P-GND	-

IC901 : SAA5554PS-OTP

Units : Volts

PIN NO	PIN NAME	VOLTAGES(V)	PIN NO	PIN NAME	VOLTAGES(V)
1	S-L CTL	-	37	N.C	-
2	BUS-STOP	5.2	38	GND	-
3	D-coil	-	39	GND	-
4	ST BY-REC	-	40	S-MUTE	2.8
5	PB-L	-	41	VDD	3.2
6	AV-L	0.67	42	OSD B	-
7	VT-L	0.67	43	OSD G	-
8	HOLD	2.48	44	OSD R	-
9	1T/AFT	3.2	45	F/B	-
10	2T/AGC	2.7	46	H-SYNC	0.79
11	2T/AFT	3.2	47	V-SYNC	-
12	SCART-ID	-	48	VSSP	-
13	GND	-	49	VDD	3.2
14	BG/I	-	50	GND	-
15	D/K	-	51	Xtal	1.6
16	1TS-L H	5.2	52	Extal	1.6
17	S-L H	4.9	53	RESET	-
18	FRA-H	3.7	54	VDD	3.2
19	LNA	4.4	55	REMOCON	5.2
20	TV PWR	3.2	56	TV CLK	5.1
21	PB MUTE	-	57	V-SYNC INTER	-
22	VSSA	-	58	TV SI	-
23	CVBS0	0.2	59	TV SO	1.0
24	CVBS1	1.3	60	TV CS	-
25	BLACK	0.48	61~62	SCL	2.3
26	IREF	1.3	63~64	SDA	2.2

11-20 Voltages (TV)

LOC	IC101*	IC101*	IC701	IV702	ICL01*
IC	TDA9818 2T-IF(F)	LA7565B 2T-IF(W)	TC4053BP	TC4052BP	STV8225
PIN NO					
1	3.3	2.0	-	1.6	4.2
2	3.3	2.2	-	0.5	3.2
3	-	7.4	-	1.6	-
4	2.0	8.0	1.1	-	0.6
5	2.1	8.9	1.1	2.2	4.3
6	3.9	3.8	-	-	3.5
7	1.7	3.2	-	-	4.3
8	2.4	2.7	-	-	6.3
9	2.3	3.7	0.8	0.8	4.3
10	2.3	2.7	0.8	0.8	3.5
11	1.6	8.3	0.8	-	4.3
12	2.0	8.3	2.2	4.0	9.0
13	2.7	0.3	-	3.4	4.3
14	4.2	7.9	2.1	2.2	4.3
15	1.4	-	-	0.4	
16	1.9	-	8.9	8.9	
17	0.4	2.9			
18	2.6	3.4			
19	2.6	3.4			
20	-	-			
21	4.9	1.7			
22	0.8	2.4			
23	3.2	3.3			
24	3.2	3.3			

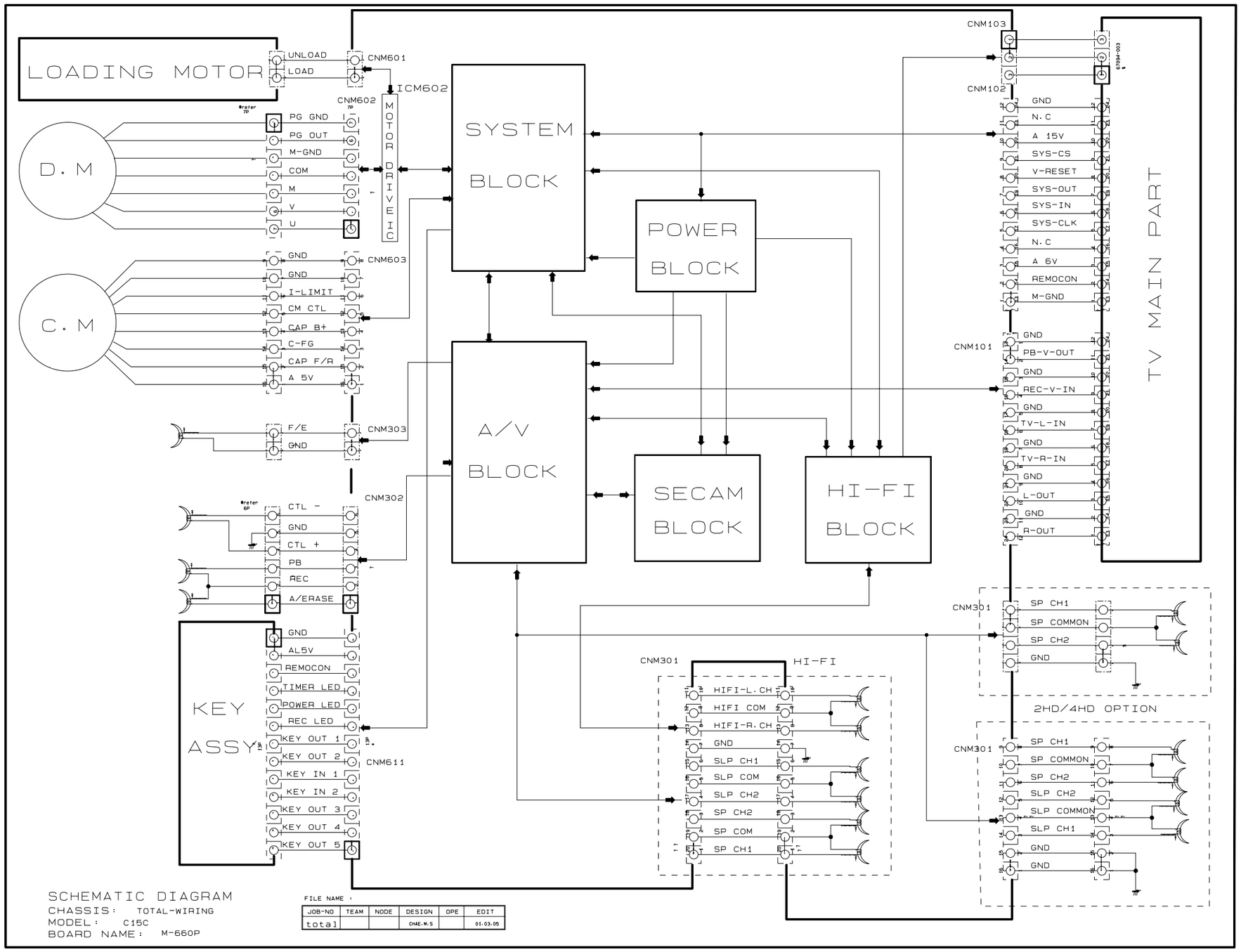
IC201 : TDA8842/8841

Units : Volts

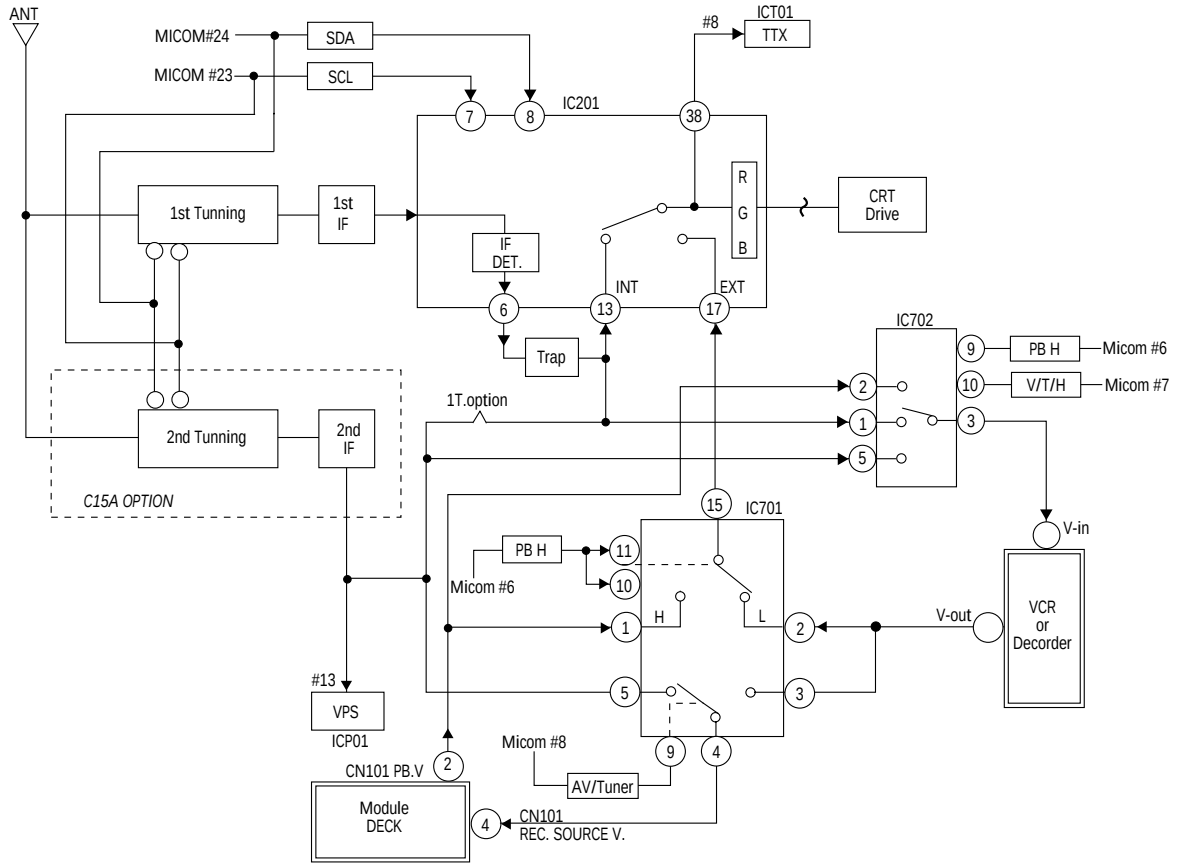
PIN NO	PIN NAME	VOLTAGES(V)
1	SOUND IF INPUT	-
2	EXT.AUDIO INPUT	3.6
3	N.C	-
4	N.C	-
5	PLL LOOPFILTER	2.4
6	IF VIDEO OUTPUT	3.2
7	SCL	4.8
8	SDA	4.8
9	BANDGAP DECOUPLING	6.6
10	CHROMA INPUT	-
11	Y/CVBS INPUT	3.3
12	MAIN POSITIVE SUPPLY	8.0
13	INT.CVBS INPUT	3.9
14	GND	-
15	AUDIO OUT	3.0
16	SECAM DECOUPLING	-
17	EXT.CVBS INPUT	3.3
18	BLACK CURRENT INPUT	5.0
19	BLUE OUTPUT	3.0
20	GREEN OUTPUT	3.2
21	RED OUTPUT	3.2
22	V-GUARD INP / BEAM CUR.LIMITTER	2.0
23	RED INPUT	3.4
24	GREEN INTPUT	3.4
25	BLUE INTPUT	3.4
26	RGB INSERTION SWITCH INP	0.1
27	LUMINANCE INPUT	2.6
28	LUMINANCE OUTPUT	2.6
29	B-Y OUTPUT	-
30	R-Y OUTPUT	-

PIN NO	PIN NAME	VOLTAGES(V)
31	B-Y OUTPUT	-
32	R-Y OUTPUT	-
33	SUBCARRIER OUTPUT	-
34	X-TAL(3.58)	2.4
35	X-TAL(4.43/3.58)	2.4
36	LOOPFILTER BURST PHASE DET	4.9
37	POSITIVE SUPPLY	8.0
38	CVBS OUTPUT	2.7
39	DECDIG	4.9
40	HOR OUTPUT	0.3
41	SANDCASTLE OUTP/FLY-BACK INP	0.5
42	PHI2 FILTER / FLASHPROT	3.2
43	PHI1 FILTER	3.9
44	GND	-
45	EAST-WEST DRIVE/AVL OUTPUT	-
46	VERT.DRIVE POS	2.2
47	VERT.DRIVE NEG	2.2
48	IF INPUT	4.5
49	IF INPUT	4.5
50	EHT/OVERVOLTAGE PROTECTION INP	2.1
51	VERT.SAWTOOTH CAPACITOR	3.7
52	REFERENCE CURRENT INPUT	3.8
53	AGC DECOUPLING CAPACITOR	4.2
54	TUNER AGC INPUT	4.4
55	AUDIO DEEMPHASSIS	2.8
56	DECOUPLING SOUND DEMODULATOR	2.4

10-2 C15C Wiring Diagram



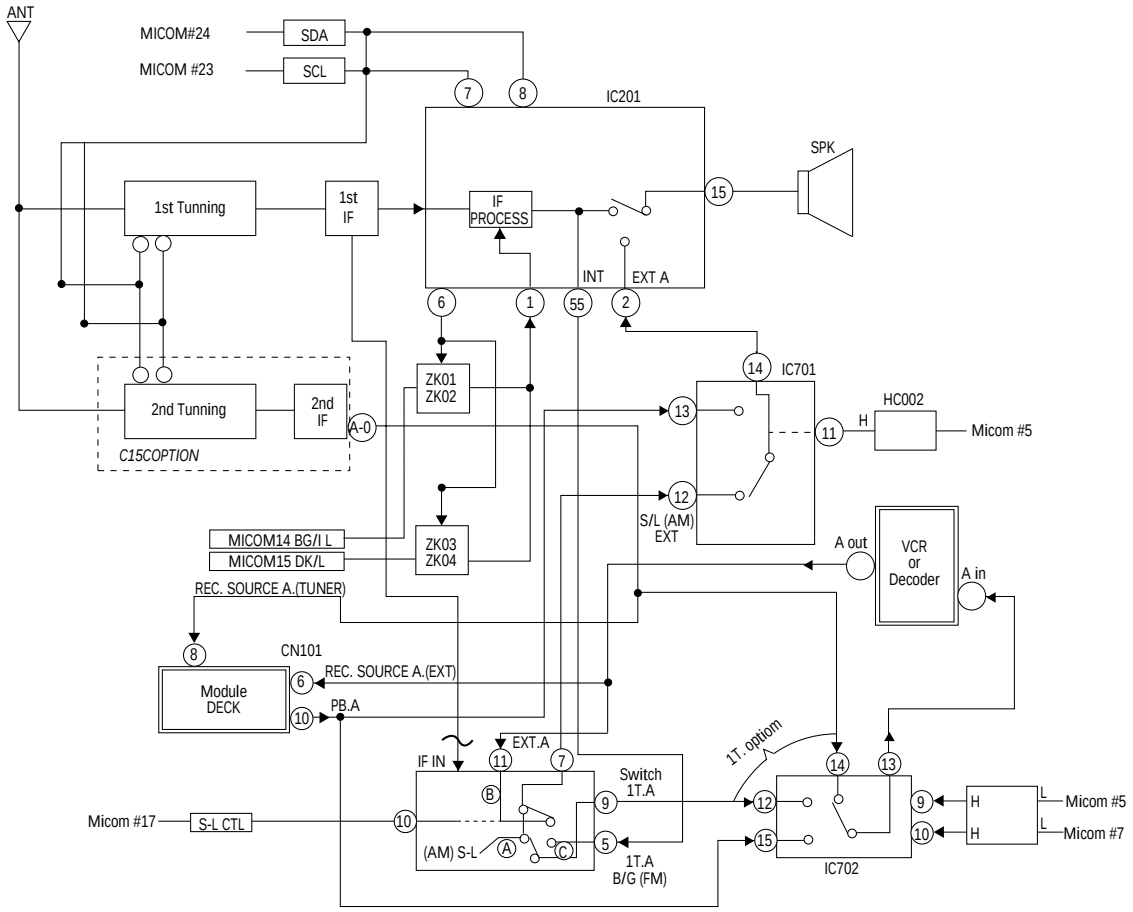
9-2 C15C Video Block Diagram (Continued)



Micom Pin Function

PIN NO.	PIN NAME	FUNCTION
6	PB H	High Output : Playback signal is monitored. The PB signal is output at scart.
7	V/T/H	High Output : The second tuner signal is output at scart.
8	AV/TUNER	High Output : AV signal is recorded. Low output : TUNER signal is recorded.
56, 57	S-L H FRA H	Port / S: S-L H, FRA H PAL/SEC: L, L FRANCE-L: L, H FRANCE-L': H, L ⓐ C. SYSTEM : PAL/SEC ARE AUTO mode, and France is SECAM mode.
23,24	SDA,SCL	Extra control signals are all controlled by the I²C bus. Select INT/EXT FRENCH system modulation

9-3 C15C Audio Block Diagram (MONO)

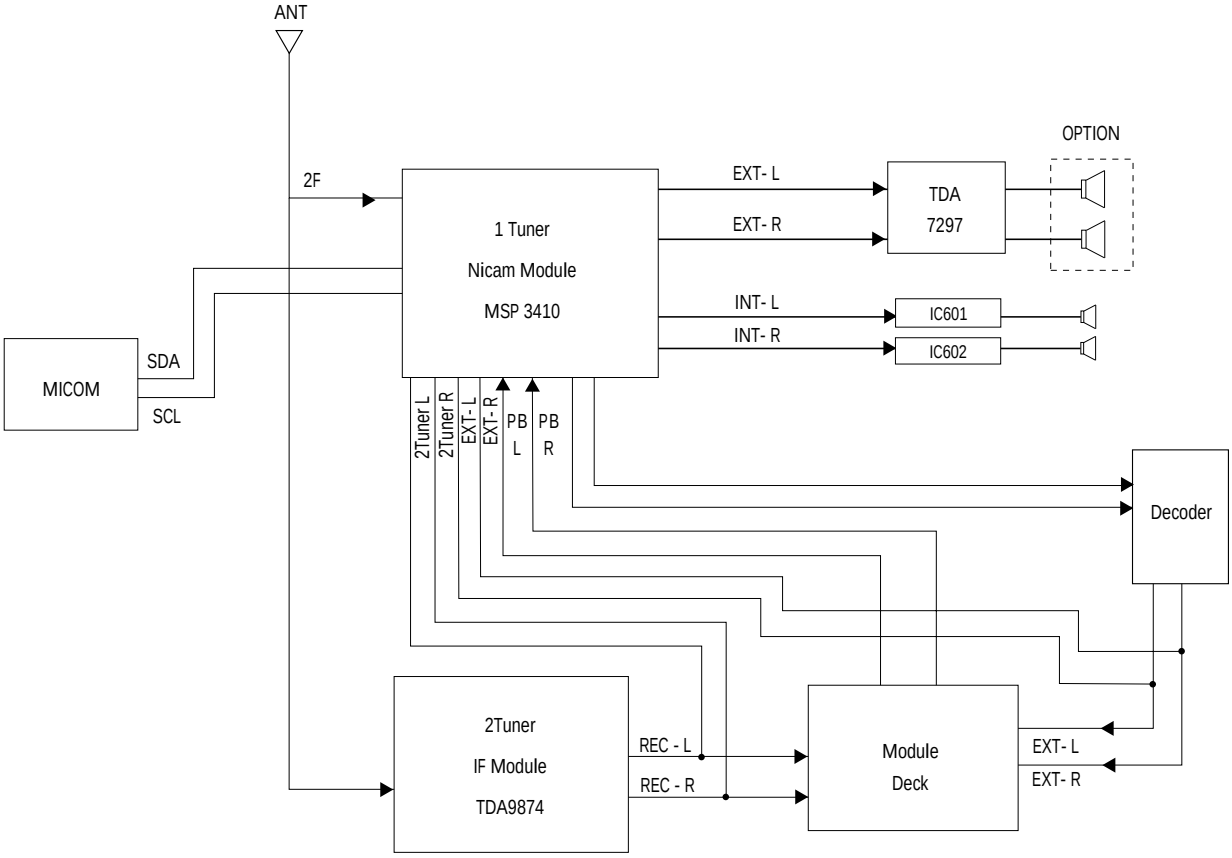


Micom Pin Function

PIN NO.	PIN NAME	FUNCTION
6	PB H	High output : PB audio is monitored. The PB audio is output at scart.
7	V/T/H	High output : The second tuner audio is output at a scart.
8	AV/TUNER	High output : AV audio is recorded. Low output : TUNER audio is recorded.
60	S-L CTL ⓐ :S-L(AM) ⓑ : B/G (FM) ⓒ :EXT	① 1.8 ~ 2.6V : In TV FM Mode, connect pin 7 to A and pin 9 to C. ② 4.1 ~ 4.9V : In TV AM Mode, connect pin 7 to A and pin 9 to A. ③ 6.4 ~ 7.2V : In AV-AM Mode, connect pin 7 to B and pin 9 to A. ④ More than 7.3V : In AV-FM Mode, connect pin 7 to B and pin 9 to C.
53,54	SDA, SCL BG/I L DK/L	

Port / S	B/G	D/K
AUTO	L	L
BG	L	H
DK	H	L
I	L	H

9-4 C15C Audio Block Diagram (Only Stereo)



Loc. No.	Code No.	Description ; Specification	Remark
....4 C605	2301-000445	C-FILM,PEF;4.7nF,5%,50V,TP,5.5x7x3mm,5mm	
....4 C606	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
....4 C607	2401-000914	C-AL;22uF,20%,16V,GP,TP,5x11,5	
....4 C608	2401-001998	C-AL;1000uF,20%,25V,GP,TP,10x20,5mm	
....4 C701	2401-000471	C-AL;10uF,20%,50V,BP,TP,5x11,5mm	
....4 C702	2401-001989	C-AL;4.7uF,20%,50V,BP,TP,5x11,5	
....4 C703	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
....4 C704	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
....4 C705	2401-002463	C-AL;470uF,20%,16V,GP,TP,8x11.5,5	
....4 C706	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
....4 C708	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
....4 C710	2401-000471	C-AL;10uF,20%,50V,BP,TP,5x11,5mm	
....4 C711	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
....4 C715	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
....4 C717	2401-000471	C-AL;10uF,20%,50V,BP,TP,5x11,5mm	
....4 C724	2401-001989	C-AL;4.7uF,20%,50V,BP,TP,5x11,5	
....4 C725	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
....4 C726	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
....4 C729	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
....4 C730	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
....4 C804	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
....4 C805	2401-002300	C-AL;47uF,20%,50V,GP,TP,6.3x11,5	
....4 C806	2301-000310	C-FILM,PEF;68nF,5%,50V,TP,8.0X8.5X4.0X5,	
....4 C808	2301-001435	C-FILM,PPF;1.5nF,5%,1.2kV,TP,15x8x12.5mm	
....4 C810	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5	
....4 C811	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm	
....4 C812	2201-000374	C-CERAMIC,DISC;0.22nF,5%,50V,NP0,TP,10.5	
....4 C813	2201-000991	C-CERAMIC,DISC;0.56nF,10%,2kV,Y5P,TP,7.5	
....4 C815	2201-000991	C-CERAMIC,DISC;0.56nF,10%,2kV,Y5P,TP,7.5	
....4 C816	2201-000991	C-CERAMIC,DISC;0.56nF,10%,2kV,Y5P,TP,7.5	
....4 C819	2401-000293	C-AL;100uF,+30-10%,200V,GP,TP,16x25	
....4 C820	2401-000293	C-AL;100uF,+30-10%,200V,GP,TP,16x25	
....4 C822	2401-002300	C-AL;47uF,20%,50V,GP,TP,6.3x11,5	
....4 C823	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5	
....4 C824	2401-002463	C-AL;470uF,20%,16V,GP,TP,8x11.5,5	
....4 C825	2401-002215	C-AL;2200uF,20%,25V,WT,TP,13x25,5	
....4 C827	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m	
....4 C828	2401-002463	C-AL;470uF,20%,16V,GP,TP,8x11.5,5	
....4 C829	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
....4 C830	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5	
....4 C831	2401-002463	C-AL;470uF,20%,16V,GP,TP,8x11.5,5	
....4 C832	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m	
....4 C835	2401-002291	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
....4 C839	2401-002215	C-AL;2200uF,20%,25V,WT,TP,13x25,5	
....4 C840	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m	
....4 C844	2401-002594	C-AL;220uF,20%,16V,GP,TP,8x11.5,5	
....4 C850	2401-001176	C-AL;33uF,20%,25V,GP,TP,5x11,5	
....4 C853	2401-001397	C-AL;470uF,20%,25V,GP,TP,10x16,5	
....4 C901	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 C902	2306-000122	C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m	
....4 C903	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3	
....4 C904	2401-000590	C-AL;1uF,20%,50V,GP,TP,3x5,5	
....4 C905	2201-000980	C-CERAMIC,DISC;0.03nF,5%,50V,NP0,TP,5x3,	
....4 C907	2201-000980	C-CERAMIC,DISC;0.03nF,5%,50V,NP0,TP,5x3,	
....4 C908	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
....4 C909	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 C910	2401-003102	C-AL;100uF,20%,10V,GP,TP,5x11,5	
....4 C911	2401-001333	C-AL;470nF,20%,50V,GP,TP,5x11,5	
....4 C912	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 C913	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
....4 C915	2301-000188	C-FILM,PEF;1nF,5%,100V,TP,10.5x12.5x6.5,	
....4 C916	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
....4 C918	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 C919	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 C920	2305-000355	C-FILM,MPEF;330nF,5%,63V,TP,-,5mm	
....4 C921	2202-000791	C-CERAMIC,MLC-AXIAL;150pF,10%,50V,Y5P,TP	
....4 C922	2202-000791	C-CERAMIC,MLC-AXIAL;150pF,10%,50V,Y5P,TP	
....4 C923	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3	
....4 CB03	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CK02	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
....4 CN501C	3711-002648	CONNECTOR-HEADER;BOX,9P,1R,2.5mm,STRAIGH	
....4 CN601	3711-002642	CONNECTOR-HEADER;BOX,3P,1R,2.5MM,STRAIGH	
....4 CN701	3711-002648	CONNECTOR-HEADER;BOX,9P,1R,2.5mm,STRAIGH	
....4 CN702	3711-002644	CONNECTOR-HEADER;BOX,5P,1R,2.5mm,STRAIGH	
⚠ 4 CR401S	2201-002028	C-CERAMIC,DISC;0.47nF,10%,2kV,Y5P,TP,7.5	
....4 CW901	2503-000156	C-NETWORK;100pFx4,20%,50V	
....4 D102	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D201	0401-001073	DIODE-SWITCHING;MA859,35V,100MA,DO-34,TP	
....4 D202	0401-001073	DIODE-SWITCHING;MA859,35V,100MA,DO-34,TP	
....4 D205	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D209	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D210	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D401	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 D402	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 D403	0402-000540	DIODE-RECTIFIER;RU20A,600V,1.5A,-,TP	
....4 D404	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T	
....4 D405	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T	
....4 D407	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 D601	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T	
....4 D607	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
⚠ 4 D801S	0402-001111	DIODE-RECTIFIER;1N5397GP,600V,1.5A,DO-20	
⚠ 4 D802S	0402-001111	DIODE-RECTIFIER;1N5397GP,600V,1.5A,DO-20	
⚠ 4 D803S	0402-001111	DIODE-RECTIFIER;1N5397GP,600V,1.5A,DO-20	
⚠ 4 D804S	0402-001111	DIODE-RECTIFIER;1N5397GP,600V,1.5A,DO-20	
....4 D805	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
....4 D806	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 D808	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
....4 D809	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
....4 D811	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 D812	0402-000540	DIODE-RECTIFIER;RU20A,600V,1.5A,-,TP	
....4 D821	0404-001056	DIODE-SCHOTTKY;RK16,60V,1.5A,DO-204AC,TP	
....4 D824	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
....4 D831	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D832	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D833	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D834	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D901	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 D902	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D903	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D904	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D905	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D907	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D908	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 D919	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DK01	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DZ201	0403-000714	DIODE-ZENER;MTZJ3.3B,3.3V,3.32-3.53V,500	
....4 DZ202	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ203	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
....4 DZ205	0403-000714	DIODE-ZENER;MTZJ3.3B,3.3V,3.32-3.53V,500	
....4 DZ206	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ207	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ208	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ301	0403-001328	DIODE-ZENER;MTZJ22A,20.15-21.20V,500mW,D	
....4 DZ302	0403-001039	DIODE-ZENER;MA2560,56V,52-60V,1W,DO-41,T	
....4 DZ303	0403-001039	DIODE-ZENER;MA2560,56V,52-60V,1W,DO-41,T	
....4 DZ304	0403-001325	DIODE-ZENER;MTZJ15C,14.35-15.09V,500mW,D	
....4 DZ601	0403-001328	DIODE-ZENER;MTZJ22A,20.15-21.20V,500mW,D	
....4 DZ608	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ701	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ702	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ703	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ704	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ802	0403-001322	DIODE-ZENER;MTZJ8.2B,7.78-8.19V,500mW,DO	
....4 DZ803	0403-000700	DIODE-ZENER;TZP33A,33V,31-35V,1W,DO-41,T	
....4 DZ804	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
....4 DZ805	0403-000705	DIODE-ZENER;TZP8.2B,8.2V,8.2-9.3V,1W,DO-	
....4 DZ809	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 DZ810	0403-001322	DIODE-ZENER;MTZJ8.2B,7.78-8.19V,500mW,DO	
....4 DZ901	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
....4 DZ902	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
....4 DZ904	0403-001322	DIODE-ZENER;MTZJ8.2B,7.78-8.19V,500mW,DO	
....4 DZ907	0403-001316	DIODE-ZENER;MTZJ3.0A,2.85-3.07V,500mW,DO	
....4 F81	3602-000114	FUSE-HOLDER;-,-,30mohm	
....4 F82	3602-000114	FUSE-HOLDER;-,-,30mohm	
⚠ 4 FD801S	3601-001086	FUSE-AXIAL LEAD;125V,5A,FAST-ACTING,GLAS	
⚠ 4 FD802S	3601-001086	FUSE-AXIAL LEAD;125V,5A,FAST-ACTING,GLAS	
⚠ 4 HC001S	AA13-20004W	IC-HYBRID;-,PAP103T,SIP,6P,PRE-AMP,TP	
....4 IC802	1203-001217	IC-POSI.ADJUST REG.;431,TO-92,3P,4.58MIL	
....4 IC803	1203-000293	IC-POSI.FIXED REG.;7808,TO-220,3P,-,PLAS	
....4 L101	2701-000202	INDUCTOR-AXIAL;560nH,10%,2.5x3.4mm	
....4 L108	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm	
....4 L201	2701-000184	INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm	
....4 L202	2701-000146	INDUCTOR-AXIAL;2.2uH,10%,2.5x3.4mm	
....4 L205	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	

Loc. No.	Code No.	Description ; Specification	Remark
....4 L301	2701-000116	INDUCTOR-AXIAL;10uH,10%,4.2x9.8mm	
....4 L302	2701-000116	INDUCTOR-AXIAL;10uH,10%,4.2x9.8mm	
....4 L303	2701-000111	INDUCTOR-AXIAL;100uH,10%,2.5x3.4mm	
....4 L304	2701-000111	INDUCTOR-AXIAL;100uH,10%,2.5x3.4mm	
....4 L403	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
....4 L405	2701-001030	INDUCTOR-AXIAL;43uH,10%,5x14mm	
....4 L406	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 L601	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
....4 L701	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
....4 L702	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
....4 L704	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
....4 L802	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
....4 L805	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
....4 L809	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
....4 L810	2701-001032	INDUCTOR-AXIAL;100uH,10%,5x14mm	
....4 L812	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
....4 L813	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
....4 L817	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
....4 L901	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
....4 L902	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
....4 L905	2701-000116	INDUCTOR-AXIAL;10uH,10%,4.2x9.8mm	
....4 L906	2701-000211	INDUCTOR-AXIAL;68uH,10%,2.5x3.4mm	
....4 L907	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
....4 L908	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
....4 PCB	AA41-00145C	PCB-MAIN;TF21B3N3X,FR-1,1L,A,1.6T,330x2	S.N.A
....4 Q201	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 Q202	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 Q203	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 Q204	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 Q205	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 Q206	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 Q207	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 Q402	0501-000369	TR-SMALL SIGNAL;KSC2331-Y,NPN,1000mW,TO-	
....4 Q601	0504-000123	TR-DIGITAL;KSR1010,NPN,300mW,10K,TO-92,T	
....4 Q603	0502-000242	TR-POWER;KSA614,PNP,25W,TO-220,TP,40-24	
....4 Q701	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T	
....4 Q802	0501-000369	TR-SMALL SIGNAL;KSC2331-Y,NPN,1000mW,TO-	
....4 Q901	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 Q903	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 Q906	0501-000369	TR-SMALL SIGNAL;KSC2331-Y,NPN,1000mW,TO-	
....4 R102	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R103	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R105	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R107	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R118	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R119	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R202	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R203	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R204	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R205	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
....4 R206	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R207	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R208	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R209	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R212	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R213	2001-000016	R-CARBON(S);1OHM,5%,1/2W,AA,TP,2.4X6.4MM	
....4 R215	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R216	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R218	2004-001914	R-METAL;39Kohm,2%,1/8W,AA,TP,1.8x3.5mm	
....4 R219	2001-000016	R-CARBON(S);1OHM,5%,1/2W,AA,TP,2.4X6.4MM	
....4 R220	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R221	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R222	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R223	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R225	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R226	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R227	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R230	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R234	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R237	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R243	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R244	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R247	2001-000490	R-CARBON;200OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R248	2001-001352	R-CARBON;62OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R249	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R250	2001-000857	R-CARBON;560OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R252	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R253	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R254	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R255	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R256	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R257	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R261	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R264	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R265	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R267	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R268	2001-000232	R-CARBON;1.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R301	2004-000500	R-METAL;2.7Kohm,1%,1/8W,AA,TP,1.8x3.2m	
....4 R302	2004-004087	R-METAL(S);1.5ohm,1%,1/2W,AA,TP,2.5x6.5m	
....4 R303	2008-000205	R-FUSIBLE(S);10ohm,5%,1/2W,AF,TP,2.5x6.5	
....4 R304	2003-000652	R-METAL OXIDE(S);330ohm,5%,2W,AF,TP,4x12	
....4 R305	2001-000085	R-CARBON(S);100KOHM,5%,1/2W,AA,TP,2.4X6.	
....4 R306	2008-000254	R-FUSIBLE(S);0.68ohm,5%,2W,AF,TP,3.9x10m	
....4 R401	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R402	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R403	2001-001114	R-CARBON(S);270OHM,5%,1/2W,AA,TP,2.4X6.4	
....4 R404	2003-001047	R-METAL OXIDE(S);68ohm,5%,2W,AF,TP,3.9x1	
....4 R405	2003-000540	R-METAL OXIDE(S);1Kohm,5%,2W,AF,TP,4x12m	
....4 R408	2008-000264	R-FUSIBLE(S);1ohm,5%,1W,AF,TP,3.9x10mm	
....4 R409	2008-000204	R-FUSIBLE(S);0.22ohm,10%,1/2W,AF,TP,2.5x	
....4 R410	2008-001053	R-FUSIBLE;22ohm,5%,1/2W,AF,TP,2.5x6.5mm	
....4 R413	2001-001037	R-CARBON(S);0.39OHM,5%,1/2W,AA,TP,2.4X6.	
....4 R414	2001-000022	R-CARBON(S);33OHM,5%,1/2W,AA,TP,2.4X6.4M	
....4 R415	2003-000993	R-METAL OXIDE(S);3.9Kohm,5%,1W,AF,TP,2.5	
....4 R416	2008-000253	R-FUSIBLE(S);0.47ohm,5%,1W,AF,TP,3.9x10m	
....4 R417	2008-000255	R-FUSIBLE(S);1.5ohm,5%,1W,AA,TP,3.9x10mm	
....4 R418	2001-001114	R-CARBON(S);270OHM,5%,1/2W,AA,TP,2.4X6.4	
....4 R419	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R420	2001-000011	R-CARBON;75KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R421	2003-000455	R-METAL OXIDE(S);100ohm,5%,2W,AA,TP,4x12	
....4 R423	2004-001384	R-METAL(S);150Kohm,1%,1/2W,AA,TP,2.4x6.4	
....4 R606	2001-000723	R-CARBON;4.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R612	2008-001018	R-FUSIBLE(S);0.47ohm,10%,2W,AF,TP,3.9x10	
....4 R613	2008-001049	R-FUSIBLE(S);3.9OHM,5%,2W,AF,TP,3.9X10MM	
....4 R614	2001-000347	R-CARBON;13KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R615	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R621	2001-001088	R-CARBON(S);1KOHM,5%,1/2W,AA,TP,2.4X6.4M	
....4 R705	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
....4 R708	2001-000674	R-CARBON;360OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R709	2003-000458	R-METAL OXIDE(S);100ohm,5%,2W,AF,TP,4x12	
....4 R710	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R711	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
....4 R712	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
....4 R713	2001-000938	R-CARBON;68OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R715	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R716	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R720	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R721	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R725	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R726	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R802	2001-000019	R-CARBON(S);10OHM,5%,1/2W,AA,TP,2.4X6.4M	
....4 R804	2001-001128	R-CARBON(S);30KOHM,5%,1/2W,AA,TP,2.4X6.4	
....4 R805	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x	
....4 R806	2003-000586	R-METAL OXIDE(S);22Kohm,5%,2W,AF,TP,4x12	
....4 R807	2001-000117	R-CARBON(S);68OHM,5%,1/2W,AA,TP,2.4X6.4M	
....4 R808	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R809	2001-000022	R-CARBON(S);33OHM,5%,1/2W,AA,TP,2.4X6.4M	
....4 R810	2001-001134	R-CARBON(S);360ohm,5%,1/2W,AA,TP,2.4x6.4	
....4 R811	2001-001134	R-CARBON(S);360ohm,5%,1/2W,AA,TP,2.4x6.4	
....4 R813	2001-001178	R-CARBON(S);680OHM,5%,1/2W,AA,TP,2.4X6.4	
....4 R814	2001-001125	R-CARBON(S);300KOHM,5%,1/2W,AA,TP,2.4X6.	
....4 R815	2004-004089	R-METAL(S);123Kohm,1%,1/2W,AA,TP,2.5x6.5	
....4 R816	2004-001983	R-METAL(S);2.49Kohm,1%,1/2W,AA,TP,2.4x6.	
....4 R821	2001-001134	R-CARBON(S);360ohm,5%,1/2W,AA,TP,2.4x6.4	
....4 R822	2004-001390	R-METAL(S);1Kohm,2%,1/2W,AA,TP,2.4x6.4mm	
....4 R824	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R825	2006-001029	R-CEMENT;3.3ohm,5%,5W,CJ,TP,10.5x14x27m	
....4 R828	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R829	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R830	2001-000302	R-CARBON;10OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R831	2003-000654	R-METAL OXIDE(S);33Kohm,5%,2W,AA,TP,4.3x	
....4 R832	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R834	2003-000664	R-METAL OXIDE(S);33ohm,5%,2W,AF,TP,4x12m	
....4 R835	2003-000639	R-METAL OXIDE(S);3.9ohm,5%,2W,AA,TP,4x12	

Loc. No.	Code No.	Description ; Specification	Remark
....4 R836	2003-000639	R-METAL OXIDE(S);3.9ohm,5%,2W,AA,TP,4x12	
....4 R860	2001-001054	R-CARBON(S);1.6KOHM,5%,1/2W,AA,TP,2.4X6.	
....4 R901	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R902	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R904	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R905	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R906	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R907	2001-000628	R-CARBON;300OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R908	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R909	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R910	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R911	2001-001062	R-CARBON(S);10MOHM,5%,1/2W,AA,TP,2.4X6.4	
....4 R912	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R913	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R914	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R916	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R917	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R918	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R919	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R920	2001-000435	R-CARBON;1MOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R921	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R922	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R924	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R926	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R928	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R930	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R931	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R935	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R940	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R941	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R942	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R943	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R944	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R945	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R947	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R948	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R949	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R953	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R955	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R957	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R961	2001-000908	R-CARBON;62KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R962	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R965	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R966	2001-000007	R-CARBON;3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R969	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 R972	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R973	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R974	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R975	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 R976	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RA802	2001-001129	R-CARBON(S);330KOHM,5%,1/2W,AA,TP,2.4X6.	
....4 RB802	2001-001129	R-CARBON(S);330KOHM,5%,1/2W,AA,TP,2.4X6.	
⚠ 4 RP801S	2002-001011	R-COMPOSITION;3.3Mohm,5%,1/2W,AA,TP,3.7x	
⚠ 4 RR401S	2004-001390	R-METAL(S);1Kohm,2%,1/2W,AA,TP,2.4x6.4mm	
....4 RU102	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RW701	2011-001133	R-NETWORK;33K/24K/75x3,5%,1/8W,X,SIP,6P,	
....4 RW901	2011-000531	R-NETWORK;4.7Kohm,5%,1/8W,A,SIP,8P,BK	
⚠ 4 RY801S	2002-001012	R-COMPOSITION;8.2Mohm,5%,1/2W,AA,TP,3.7x	
⚠ 4 VP801S	1405-000152	VARISTOR;560V,2500A,14x8.5mm,TP	
⚠ 4 VX801S	1405-000152	VARISTOR;560V,2500A,14x8.5mm,TP	
....4 X202	2801-000274	CRYSTAL-UNIT;4.433619MHZ,30PPM,28-AAM,20	
....4 X901	2801-001381	CRYSTAL-UNIT;12MHz,30ppm,28-AAA,30pF,50o	
....4 Z101	2903-001019	FILTER-CERAMIC;BR,5.5MHz,-,-,-,TP,-	
....4 Z102	2903-001040	FILTER-CERAMIC;TR,5.5/6.0/6.5MHz,-,1dB,-	
....4 ZK01	2903-000184	FILTER-CERAMIC;BP,5.5MHz,120KHz,6dB,-,TP	
..2	AA98-60002E	ASSY-SUB,PART;SCV11D,MAIN,-,ALL	S.N.A
...3	0202-000187	SOLDER-WIRE FLUX;-,RS60S,D1.2,63Sn/37Pb	S.N.A
..2	AA60-10008A	SCREW-TAPPING;-,SWRCH18A,M3,L10,TH,+,-,-	
..2	AA63-00285B	SHIELD CASE;-,SPTE,T 0.5,C15C,TF14B5	S.N.A
..2	AA63-40279A	SHIELD-CASE-IF;-,SPTE,T0.25,SCT53A,CW764	S.N.A
..2	AA65-30013A	CLAMP-WIRE;-,NYLON-66,V0,-,NTR,DAWH-45N	S.N.A
..2	AA65-30014A	CLAMP-WIRE;-,NYLON-66,V0,-,NTR,DATL-450-	
..2	AA65-30018A	CLAMP-WIRE;DONG-A,NYLON-66,-,-,-,DATL-60	S.N.A
..2	AA65-30109A	CLAMP-FBT;-,NYLON-66,V2,-,BLK,-	S.N.A

Loc. No.		Code No.	Description ; Specification	Remark
			ASSY-CRT	
1	*	AA94-50008P	ASSY-CRT;A34KQV42X,-300MG,14,BARE,TVCR	S.N.A
..2		AA27-00041A	DEFLECTION-YOKE;-,QPC-E3704,14INCH,-,3.1	
..2		AA63-60028A	SPACER-DY;-,NEOPRENE,-,-,-,BLK,-,-,V0 W1	
..2		AA27-00001A	MAGNET-CONVERGENCE;-,JH225-06A,22.5MM	
⚠ ..2		AA03-10002N	CRT-COLOR;-,A34KQV42X,-300MG,14,90DEG,5	
			ASSY-PCB,MASTER	
1	*	AA95-00241A	ASSY-PCB,MASTER;-,-,C15A,PAL,-,SET ALL	
..2	PCB	AA41-10578D	PCB-MASTER;C15A,1L,CEM-1,245X245X1.6T,20	S.N.A
..2		AA99-20067W	ASSY-PCB SUB,AUTO; AA95-00241A ,V	S.N.A
..2		AA98-60002H	ASSY-SUB,PART;SCV11D,MASTER BOARD,-,ALL	S.N.A
...3		0202-000187	SOLDER-WIRE FLUX;-,RS60S,D1.2,63Sn/37Pb	S.N.A
..2		AA61-10320A	BRACKET-MASTER;T3350,SECC,T1.0,-,-,-,-	S.N.A
..2		3403-000179	SWITCH-PUSH;250V,5A,DPST,-,JPW-2104B	
..2		AA39-20041B	LEAD CONNECTOR-ASSY;,2P,YFH800-02,S,300,	
..2		6001-000057	SCREW-MACHINE;RH,+,M3,L6,ZPC(BLK),SWRCH1	S.N.A
			ASSY PCB CRT	
1	*	AA95-00629A	ASSY PCB CRT;-,C15C,14,-,-	
..2	C502	2301-000213	C-FILM,PEF;220nF,5%,250V,TP,21.5x11,7.5	
..2	C503	2201-000723	C-CERAMIC,DISC;4.7nF,20%,3KV,Y5U,TP,16x5	
..2	C504	2401-001232	C-AL;4.7uF,20%,250V,GP,TP,10x12.5,5	
..2	C506	2401-000430	C-AL;10uF,20%,250V,GP,TP,10x16mm,5m	
..2	CN503A	AA39-20031C	LEAD CONNECTOR-ASSY;,9P,67096-009,S,400,	
..2	CN503B	3711-002648	CONNECTOR-HEADER;BOX,9P,1R,2.5mm,STRAIGH	
..2	D501	0402-000216	DIODE-RECTIFIER;ERC24-06,600V,1.0A,DO-20	
..2	D502	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T	
..2	D503	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T	
..2	D504	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T	
..2	DZ501	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
..2	DZ502	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
..2	DZ503	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
..2	DZ504	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
..2	GT502A	AA39-20010B	LEAD CONNECTOR-ASSY;,1P,YFH800-01,S,500,	
..2	IC501	AA96-50311A	ASSY-H/S;-,VIDEO,AA62-30175D,TDA6107Q,-	S.N.A
...3		1201-001159	IC-VIDEO AMP;6107,ZSIP,9P,-,SINGLE,-,PLA	
...3		6003-000334	SCREW-TAPTITE;RH,+,2S,M3,L6,ZPC(YEL),SWR	S.N.A
...3		AA62-30175D	HEAT SINK-PS;-,SECC,T1.0,-,33X15X30 FT-2	S.N.A
..2	PCB	AA41-00186A	PCB-CRT;C15C,1L,FR-1,245x245x1.6T,9A,M	S.N.A
..2	R501M	2002-001009	R-COMPOSITION;2.7Kohm,10%,1/2W,AA,TP,3.7	
..2	R502M	2002-001009	R-COMPOSITION;2.7Kohm,10%,1/2W,AA,TP,3.7	
..2	R503	2002-001009	R-COMPOSITION;2.7Kohm,10%,1/2W,AA,TP,3.7	
..2	R504	2001-001062	R-CARBON(S);10MOHM,5%,1/2W,AA,TP,2.4X6.4	
..2	R505	2008-001015	R-FUSIBLE(S);1.5ohm,5%,2W,AF,TP,3.9x10mm	
..2	R510	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
..2	R511	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
..2	R512	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
⚠ ..2	V999S	3704-000103	SOCKET-CRT;10P,22.5,14.3,SN,ISMS01S/BK	
..2		AA98-60002F	ASSY-SUB,PART;SCV11D,CRT,-,ALL	S.N.A
...3		0202-000187	SOLDER-WIRE FLUX;-,RS60S,D1.2,63Sn/37Pb	S.N.A
			ASSY-PCB,A/V	
1	*	AA95-00630B	ASSY-PCB,A/V;-,14/20/21,C15C,PAL,-,MO	
..2	CNC701	AA39-20112D	LEAD CONNECTOR-ASSY;,9P,YBNH025-09,67096	
..2	CNC701	AA39-20069D	LEAD CONNECTOR-ASSY;,5P,YBNH025-05,67096	
..2	CY702	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
..2	JA01	3722-001343	JACK-RCA;1P,3.4MM,NI,WHT,-	
..2	JA02	3722-001342	JACK-RCA;1P,3.4MM,NI,YEL,-	
..2	JA03	3722-000145	JACK-PHONE;1P,3.6mm,MBAG,BLK,-	
..2	LY701	2701-000116	INDUCTOR-AXIAL;10uH,10%,4.2x9.8mm	
..2	LY702	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
..2	PCB	AA41-00257A	PCB-MONO A/V;C15C,1L,FR-1,245x245x1.6T,3	S.N.A

Loc. No.		Code No.	Description ; Specification	Remark
..2	RY701	2001-001185	R-CARBON(S);750OHM,5%,1/2W,AA,TP,2.4X6.4	
..2	RY702	2001-001185	R-CARBON(S);750OHM,5%,1/2W,AA,TP,2.4X6.4	
..2		AA98-60002G	ASSY-SUB,PART;SCV11D,A/V BOARD,-,ALL	S.N.A
...3		0202-000187	SOLDER-WIRE FLUX;-,RS60S,D1.2,63Sn/37Pb	S.N.A

ASSY-SPEAKER

1	*	AA96-00149A	ASSY-SPEAKER;-,-,16 OHM,2.5W,3001-001015	S.N.A
..2		0202-000187	SOLDER-WIRE FLUX;-,RS60S,D1.2,63Sn/37Pb	S.N.A
..2		3001-001015	SPEAKER;2.5W,16ohm,88dB,150Hz	
..2		AA39-20501A	LEAD CONNECTOR-ASSY;,3(2),67096-003,REC,	

ASSY-POWER,CORD

⚠ 1	*	AA96-20124A	ASSY-POWER,CORD;-,EP2/YES(AU),H/C250,KJP	

ASSY-CHASSIS,PART

1	*	AA90-00037B	ASSY-CHASSIS,PART;PAL SESA,14C5	S.N.A
..2	PCB+HC	AA60-10008A	SCREW-TAPPING;-,SWRCH18A,M3,L10,TH,+,-,-	
..2		AA61-20163A	HOLDER-CHASSIS;-,T3350,ABS,V0,GRY,-	S.N.A

ASSY CABINET

1	*	AA90-00126D	ASSY CABINET;14A5 MASTER,TB14A53X/RAD	
..2	AV+CF	6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	S.N.A
..2	CB+CF	6002-000514	SCREW-TAPPING;RH,+,2,M4,L15,ZPC(BLK),SWR	
..2	CB+FD	6002-000514	SCREW-TAPPING;RH,+,2,M4,L15,ZPC(BLK),SWR	
..2	CRT	AA60-10050R	SCREW-ASSY;-,SWRCH18A,M5,L31.5,HH,+,WC,-	S.N.A
..2	MST+CF	6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	S.N.A
..2		AA65-30016A	CLAMP-D,COIL;-,NYLON-66,V0,-,NTR,DADH-36	S.N.A
..2		AA60-00091A	SPACER-FELT;-,FELT,150X10,-,-,BLK,T0.35,	
..2		AA64-00111A	INLAY-BACK,AV;14.20A5,21B5,-,PS SHEET,T0	
..2		AA64-31340C	CABINET-BACK;-,14A5,C5,SEA ,HIPS,V0,BLK	
..2		AA65-30008A	CLAMP-CORD;-,PE,HB,-,BLK,-	S.N.A

ASSY CABINET FRONT

1	*	AA91-00184D	ASSY CABINET FRONT;-,14A5 MASTER,BK708P	
..2	IND+CF	6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	S.N.A
..2	KF+CF	6003-001019	SCREW-TAPTITE;RH,+,B,M4,L12,ZPC(BLK),SWR	S.N.A
..2	MASTER	AA61-60003Q	SPRING-CS;-,SUS304,0.5,OD8,H10,N5,-,-,-	
..2		AA64-70127F	BADGE-BRAND;AL,SAMSUNG,SILVER,L40,R800,N	S.N.A
..2		AA64-31339P	CABINET FRONT;14A5,C5,BK708P HITRON EL,H	
...3		AA61-40010A	BOSS-WING;-,HIPS,-,-,-,NTR,HB	
..2		AA64-00051E	PANEL CONTROL;14A5 MAST,HIPS,-,V0,BLK,-	
..2		AA64-00038A	KNOB-MASTER;-,TVCR 14,20,M/S BK-708P,A	
..2		AA64-00018A	WINDOW-REMOCON;-,TVN-502V,-,PC,VIOLET,-	
..2		AA64-00012A	INDICATOR-LED;-,TVN-502V,-,PC,-,CLEAR,-	
..2		AA64-00011A	KNOB-FAMILY;-,TVN-502V,BK-708P ,ABS,HB,B	

ASSY M/DECK

1	*	AA94-02353A	ASSY M/DECK;M-520BK/XSA-X,2HD,-,14,HQ,C	
..2		AA90-00366A	ASSY FRAME;PAL TTX(X) EL 14,TS-DECK	S.N.A
...3	CFT+FD	6003-001022	SCREW-TAPTITE;RH,+,B,M3,L12,ZPC(BLK),SWR	
...3	DE+FD	6002-000522	SCREW-TAPPING;TH,+,2,M4,L15,ZPC(BLK),SWR	S.N.A
...3	FD+PCB	6003-001022	SCREW-TAPTITE;RH,+,B,M3,L12,ZPC(BLK),SWR	
...3		AA64-01013Y	DOOR-HOUSING;TVCR,ABS,HB,BLK,-,-,BK708P	
...3		AA60-00091A	SPACER-FELT;-,FELT,150X10,-,-,BLK,T0.35,	
...3		AA63-40313A	SHIELD-CASE,B;TVN334V,SPTE,T0.3,-	S.N.A
...3		AA63-00036A	COVER-FRAME TOP ASSY;-,TS-DECK,PAL,SECC,	
....4		AA63-00012A	COVER-FRAME,T;-,TVCR,PAL,SECC,-,-,-,-	
....4		AA63-40301A	SHIELD-PLATE;-,S30,T0.5,-,TF531	
...3		AA61-00050A	SPRING-DOOR;-,SUS304,-,-,-,-,0.5,OD6,H9.	
...3		AA61-00004B	FRAME-DECK;TVCR,HIPS,-,V0,BLK,-,-,-,-	
..2		AA91-00308A	ASSY DECK;-,2HD,PAL,BON,SVTW-M2P/BON	S.N.A
..2		AA95-00456X	ASSY-PCB,M/DECK;-,2HD,C15C,PAL,-,TS	
...3	CNM101	AA39-20159D	LEAD CONNECTOR-ASSY;,12P,YBNH025-12,6709	
...3	CNM102	AA39-20071D	LEAD CONNECTOR-ASSY;,12P,YBNH025-12,6709	
...3	CNM301	3708-000395	CONNECTOR-FPC/FC/PIC;8P,1.25MM,STRAIGHT,	
...3	CNM302	3708-001053	CONNECTOR-FPC/FC/PIC;7P,1.25MM,STRAIGHT,	
...3	CNM303	3710-000405	CONNECTOR-SOCKET;2P,2R,2.5MM,-,	
...3	CNM51A	3809-001111	CABLE-FLAT;30V,80C,130mm,7P,1.25mm,UL289	
...3	CNM601	AA39-20603A	LEAD CONNECTOR-ASSY;,2P,GIL-S-2S-S2C2-S,	
...3	CNM602	3708-001131	CONNECTOR-FPC/FC/PIC;5P,1.25mm,STRAIGHT,	
...3	CNM6033711-003749		CONNECTOR-HEADER;BOX,8P,2R,2mm,STRAIGHT,	
...3	CNM64A	3809-001112	CABLE-FLAT;30V,80C,130mm,5P,1.25mm,UL289	
...3	FLM301	AA26-10006C	TRANS-IF;-,7MF,BIAS,2.4MH,7MM,-,65.3KHZ	
...3	GPM001	AA63-40311A	GROUND-PLATE,POB;-,PBS,T0.3,TVN334V,-	S.N.A
...3	ICM101	AA96-00111L	ASSY-H/S;-,-,AA62-30013L,KA78R12,-	S.N.A
....4		1203-000165	IC-POSI.ADJUST REG.;78R12,TO-220,3P,-,-	
....4		6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	S.N.A
....4		AA62-30013L	HEATSINK-ES;-,-,-,-,44/22,-,WHT,-,-,-	S.N.A
...3	ICM102	AA96-50152D	ASSY-H/S;-,MAIN,AA62-30012A,KA7809,-	S.N.A
....4		1203-000298	IC-POSI.FIXED REG.;7809,TO-220,3P,-,PLAS	
....4		6003-000333	SCREW-TAPTITE;RH,+,2S,M3,L10,ZPC(YEL),SW	S.N.A
....4		AA62-30012A	HEAT SINK-ES;-,A6063 EXTR,-,-,T0220,-,-	S.N.A
...3	ICM602	1003-001162	IC-MOTOR DRIVER;KA3082,SIP,10PIN,25MIL,D	
...3	LDM601	AA91-60318A	ASSY-HOLDER,LED;-,ABS,HB,BLK,IR LED,TS-D	
....4		0601-001303	LED-IR;SIDE-VIEW,2.5mm,75mW,6V,950nm,	
....4		AA61-00003A	HOLDER-LED;-,TVN-502V,-,HB,BLK,-	
...3	LDM602	AA91-60317A	ASSY-GUIDE,LED;-,ABS,V0,BLK,RED LED 03,T	
....4		0601-000385	LED;ROUND,RED,3mm,700nm	
....4		AA61-00006A	GUIDE-LED;TVCR ,ABS,-,-,-,BLK,V0	
...3	PTM601	0604-001122	PHOTO-INTERRUPTER;TR,0.065%,150mW,DIP-4,	
...3	PTM602	0604-001122	PHOTO-INTERRUPTER;TR,0.065%,150mW,DIP-4,	
...3	REM601	AA59-60003V	MODULE-REMOCON;-,SRV-18,38KHZ,940NM,MESH	
...3	SM601	AA91-60319A	ASSY-HOLDER,SENSOR;-,ABS,HB,BLK,TR LED,T	
....4		0603-001011	PHOTO-TR;NPN,35V,6V,50mA,75mW,BK	
....4		AA61-00005A	HOLDER-SENSOR;-,TVN-502V,-,HB,BLK,-	
...3	SM602	AA91-60319A	ASSY-HOLDER,SENSOR;-,ABS,HB,BLK,TR LED,T	
...3	SWM610	AA34-20001A	SWITCH-MODE;1,25x14.6x29.8mm,BK,DC5V	
...3	SWM611	AA34-40001A	SWITCH-REC.;1EA,37.5x14.4mm,BK,DC5V	
...3	XTM602	2801-003224	CRYSTAL-UNIT;32.768KHZ,20PPM,28-AAY,12.5	
...3		AA98-60005X	ASSY-SUB,PART;SCV11F,DECK,-,ALL	S.N.A
....4		0202-000187	SOLDER-WIRE FLUX;-,RS60S,D1.2,63Sn/37Pb	S.N.A
...3		AA99-20072H	ASSY-PCB SUB,AUTO; AA95-00456X ,V	S.N.A
....4	CM101	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
....4	CM102	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
....4	CM103	2401-000832	C-AL;220uF,20%,25V,GP,TP,8x11.5,5	
....4	CM104	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
....4	CM105	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
....4	CM106	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
....4	CM107	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4	CM109	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
....4	CM110	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
....4	CM111	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
....4	CM112	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4	CM113	2401-000832	C-AL;220uF,20%,25V,GP,TP,8x11.5,5	
....4	CM114	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4	CM301	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4	CM303	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
....4	CM304	2401-000426	C-AL;10uF,20%,16V,GP,TP,3.5x5,5	
....4	CM305	2301-000342	C-FILM,PEF;2.2nF,5%,50V,TP,7.4x3.9x13mm,	
....4	CM306	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm	
....4	CM307	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
....4	CM308	2401-000665	C-AL;2.2uF,20%,50V,GP,TP,3.5x5,5	
....4	CM309	2305-000427	C-FILM,MPEF;47nF,5%,100V,TP,7.5x12.5x3.5	
....4	CM310	2401-000590	C-AL;1uF,20%,50V,GP,TP,3x5,5	
....4	CM311	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4	CM312	2401-002291	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
....4	CM313	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4	CM314	2202-000216	C-CERAMIC,MLC-AXIAL;27pF,5%,50V,SL,TP,3.	
....4	CM315	2201-002031	C-CERAMIC,DISC;0.005nF,0.5pF,50V,NP0,TP,	
....4	CM316	2202-000862	C-CERAMIC,MLC-AXIAL;390pF,10%,50V,Y5P,TP	
....4	CM317	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
....4	CM318	2202-000162	C-CERAMIC,MLC-AXIAL;15pF,5%,50V,SL,TP,3.	
....4	CM319	2201-000345	C-CERAMIC,DISC;0.2nF,5%,50V,SL,TP,7x3,5	

Loc. No.	Code No.	Description ; Specification	Remark
....4 CM320	2202-000849	C-CERAMIC,MLC-AXIAL;18pF,5%,50V,CH,TP,3.	
....4 CM321	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM322	2401-002463	C-AL;470uF,20%,16V,GP,TP,8x11.5,5	
....4 CM323	2401-000426	C-AL;10uF,20%,16V,GP,TP,3.5x5,5	
....4 CM324	2401-000914	C-AL;22uF,20%,16V,GP,TP,5x11,5	
....4 CM325	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3	
....4 CM326	2401-001333	C-AL;470nF,20%,50V,GP,TP,5x11,5	
....4 CM327	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM328	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm	
....4 CM329	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM331	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
....4 CM332	2401-000426	C-AL;10uF,20%,16V,GP,TP,3.5x5,5	
....4 CM333	2401-000590	C-AL;1uF,20%,50V,GP,TP,3x5,5	
....4 CM334	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM335	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM336	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM337	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM338	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM339	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM340	2401-002291	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
....4 CM341	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM342	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM343	2401-002291	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
....4 CM344	2401-000590	C-AL;1uF,20%,50V,GP,TP,3x5,5	
....4 CM345	2202-002055	C-CERAMIC,MLC-AXIAL;47nF,+80-20%,50V,Y5V	
....4 CM346	2401-000590	C-AL;1uF,20%,50V,GP,TP,3x5,5	
....4 CM347	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
....4 CM348	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
....4 CM349	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM350	2202-002055	C-CERAMIC,MLC-AXIAL;47nF,+80-20%,50V,Y5V	
....4 CM351	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
....4 CM352	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM353	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
....4 CM354	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM355	2401-000914	C-AL;22uF,20%,16V,GP,TP,5x11,5	
....4 CM356	2401-002462	C-AL;33uF,20%,16V,GP,TP,5x11,5	
....4 CM357	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
....4 CM358	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM359	2201-000611	C-CERAMIC,DISC;0.056nF,5%,50V,NP0,TP,7x3	
....4 CM360	2201-000611	C-CERAMIC,DISC;0.056nF,5%,50V,NP0,TP,7x3	
....4 CM361	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
....4 CM362	2301-000301	C-FILM,PEF;6.8nF,5%,50V,TP,6.5X5.5X3.0X5	
....4 CM363	2301-000301	C-FILM,PEF;6.8nF,5%,50V,TP,6.5X5.5X3.0X5	
....4 CM364	2301-000314	C-FILM,PEF;8.2nF,5%,50V,TP,6.5x3.0x5.5mm	
....4 CM365	2401-000027	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
....4 CM367	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM368	2301-000175	C-FILM,PEF;15nF,5%,50V,TP,7.1x3.5x13mm,5	
....4 CM370	2301-000254	C-FILM,PEF;39nF,5%,50V,TP,7.5x3.5x6.5mm,	
....4 CM371	2301-000301	C-FILM,PEF;6.8nF,5%,50V,TP,6.5X5.5X3.0X5	
....4 CM372	2301-000160	C-FILM,PEF;12nF,5%,50V,TP,11.0x6.0x9.0mm	
....4 CM373	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
....4 CM377	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM378	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM379	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM383	2202-000830	C-CERAMIC,MLC-AXIAL;82pF,10%,50V,Y5P,TP,	
....4 CM384	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
....4 CM390	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM391	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM392	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5	
....4 CM393	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM394	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM395	2202-000279	C-CERAMIC,MLC-AXIAL;47pF,5%,50V,SL,TP,3.	
....4 CM601	2202-000806	C-CERAMIC,MLC-AXIAL;220pF,10%,50V,Y5P,TP	
....4 CM602	2301-000310	C-FILM,PEF;68nF,5%,50V,TP,8.0X8.5X4.0X5,	
....4 CM603	2301-000310	C-FILM,PEF;68nF,5%,50V,TP,8.0X8.5X4.0X5,	
....4 CM604	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5	
....4 CM605	2401-002291	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
....4 CM606	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM607	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
....4 CM608	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
....4 CM609	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
....4 CM610	2202-000205	C-CERAMIC,MLC-AXIAL;22pF,5%,50V,SL,TP,1.	
....4 CM611	2401-000590	C-AL;1uF,20%,50V,GP,TP,3x5,5	
....4 CM612	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM613	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM614	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
....4 CM615	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM616	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
....4 CM617	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
....4 CM621	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
....4 CM622	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM623	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
....4 CM624	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM627	2401-002009	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
....4 CM628	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM629	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM630	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM631	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM632	2401-002009	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
....4 CM633	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM634	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM635	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
....4 CM636	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP	
....4 CM637	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP	
....4 CM638	2202-000263	C-CERAMIC,MLC-AXIAL;470pF,10%,50V,Y5P,TP	
....4 CM639	2401-000914	C-AL;22uF,20%,16V,GP,TP,5x11,5	
....4 CM640	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP	
....4 CM641	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
....4 CM642	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM645	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM647	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
....4 CM649	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 CM651	2202-000632	C-CERAMIC,MLC-AXIAL;100nF,20%,50V,Z5U,TP	
....4 DM102	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 DM104	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 DM107	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DM108	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 DM109	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DM110	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 DM111	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 DM112	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 DM305	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DM601	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DM602	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DM606	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 DM607	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DM608	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DM609	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DM610	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
....4 DM611	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 DM714	0401-000005	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
....4 ICM301	1204-001649	IC-VIDEO PROCESS;LA71598M,QFP,100P,-,PLA	
....4 ICM601	AA09-00049A	IC-MCU;UPD784927GF-160-BA,SNM-734MD,S	
....4 ICM603	1203-000642	IC-RESET;572,TO-92,3P,-,PLASTIC,2.35/2.	
....4 JM224	2701-000211	INDUCTOR-AXIAL;68uH,10%,2.5x3.4mm	
....4 LM101	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM301	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM302	2701-000207	INDUCTOR-AXIAL;56uH,5%,2.5x3.4mm	
....4 LM303	2701-000118	INDUCTOR-AXIAL;120uH,10%,2.5x3.4mm	
....4 LM304	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM305	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM306	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM307	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM308	2702-000120	INDUCTOR-RADIAL;15mH,5%,6.2x7.4mm	
....4 LM309	2701-000112	INDUCTOR-AXIAL;100uH,10%,3x7mm	
....4 LM310	2701-000180	INDUCTOR-AXIAL;33uH,5%,2.5x3.4mm	
....4 LM601	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM602	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM603	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM604	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 LM605	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
....4 PCB	AA41-00143B	PCB-DECK MAIN;C15C,1L,FR-1,330x245x1.6T,	S.N.A
....4 QM101	0501-000316	TR-SMALL SIGNAL;KSA928A-Y,PNP,1000mW,TO-	
....4 QM102	0504-000116	TR-DIGITAL;KSR1001,NPN,300MW,4.7K/4.7K,T	
....4 QM106	0501-000362	TR-SMALL SIGNAL;KSA2328A-Y,NPN,1W,TO-92L	
....4 QM107	0501-000362	TR-SMALL SIGNAL;KSA2328A-Y,NPN,1W,TO-92L	
....4 QM301	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
....4 QM302	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
....4 QM304	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
....4 QM305	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
....4 QM306	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
....4 QM308	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
....4 QM311	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
....4 QM312	0501-000010	TR-SMALL SIGNAL;KSC1008,NPN,800mW,TO-92,	

Loc. No.	Code No.	Description ; Specification	Remark
....4 QM313	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400mW,T0-9	
....4 QM314	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400mW,T0-9	
....4 QM315	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
....4 QM317	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
....4 QM603	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-	
....4 QM604	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-	
....4 QM605	0504-000118	TR-DIGITAL;KSR1003,NPN,300MW,22K/22K,TO-	
....4 RM101	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM102	2001-001122	R-CARBON(S);3.9KOHM,5%,1/2W,AA,TP,2.4X6.	
....4 RM103	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM106	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM107	2001-001107	R-CARBON(S);220ohm,5%,1/2W,AA,TP,2.4x6.4	
....4 RM108	2001-000674	R-CARBON;360OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM302	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM303	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM304	2001-000645	R-CARBON;330KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM305	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM306	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM307	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM310	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM312	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM313	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM314	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM315	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM316	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM317	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM318	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
....4 RM319	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
....4 RM323	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM324	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM325	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM327	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM328	2001-000800	R-CARBON;5.1KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM329	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM330	2001-000037	R-CARBON(S);330OHM,5%,1/2W,AA,TP,2.4X6.4	
....4 RM331	2001-000723	R-CARBON;4.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM333	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM334	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM335	2001-000232	R-CARBON;1.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM338	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM339	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM340	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM341	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM344	2001-000454	R-CARBON;2.2MOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM345	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM346	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM347	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM348	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM349	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM350	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM351	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM352	2001-000006	R-CARBON;2.4KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM353	2001-000904	R-CARBON;620OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM354	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM356	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM357	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM358	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM359	2001-000458	R-CARBON;2.2OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM360	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM361	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM362	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM363	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM365	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM369	2001-000800	R-CARBON;5.1KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM370	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM371	2001-001000	R-CARBON;82KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM372	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM373	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM377	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM378	2001-000995	R-CARBON;8200HM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM508	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM509	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM514	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM515	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM601	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM602	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM603	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM604	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM605	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM606	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM607	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM608	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM609	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM610	2001-000010	R-CARBON;68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM611	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM612	2001-000009	R-CARBON;20KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM613	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM614	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM615	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM616	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM618	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM619	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM620	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM624	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM626	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM628	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM629	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM630	2003-002129	R-METAL OXIDE(S);3.9ohm,5%,2W,AF,TP,3.9x	
....4 RM631	2001-001077	R-CARBON(S);150OHM,5%,1/2W,AA,TP,2.4X6.4	
....4 RM632	2001-001077	R-CARBON(S);150OHM,5%,1/2W,AA,TP,2.4X6.4	
....4 RM633	2001-001077	R-CARBON(S);150OHM,5%,1/2W,AA,TP,2.4X6.4	
....4 RM634	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM635	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM636	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
....4 RM637	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM638	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM639	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM640	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM641	2001-000118	R-CARBON(S);180OHM,5%,1/2W,AA,TP,2.4X6.4	
....4 RM642	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM643	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM644	2001-000010	R-CARBON;68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM647	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM648	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM649	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM650	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM651	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM652	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM653	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM654	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
....4 RM655	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
....4 RM656	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM657	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM660	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM661	2001-000554	R-CARBON;270OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM663	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM664	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM665	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM666	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM667	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM668	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM669	2001-000539	R-CARBON;24KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM670	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM671	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM674	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM678	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM679	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM680	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM681	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM682	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM683	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM684	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM685	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM686	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM687	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM688	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM689	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM690	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM691	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM692	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM693	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM694	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM696	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM697	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc. No.	Code No.	Description ; Specification	Remark
....4 RM698	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 RM699	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
....4 SWM601	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 SWM602	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 SWM603	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 SWM604	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 SWM605	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 SWM606	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 SWM607	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 SWM608	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 SWM609	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 SWM612	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
....4 VRM601	2103-000669	VR-SEMI;10Kohm,25%,1/5W,TOP	
....4 XTM301	2801-000277	CRYSTAL-UNIT;4.433619MHz,8ppm,28-AAM,S,1	
....4 XTM601	2801-003750	CRYSTAL-UNIT;8MHZ,30PPM,28-AAA,22PF,80OH	
....4 ZDM101	0403-001373	DIODE-ZENER;MTZJ5.1A,4.81V-5.07V,500mW,D	
....4 ZDM102	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
....4 ZDM601	0403-001211	DIODE-ZENER;MTZJ12B,11.44-12.03V,500MW,D	

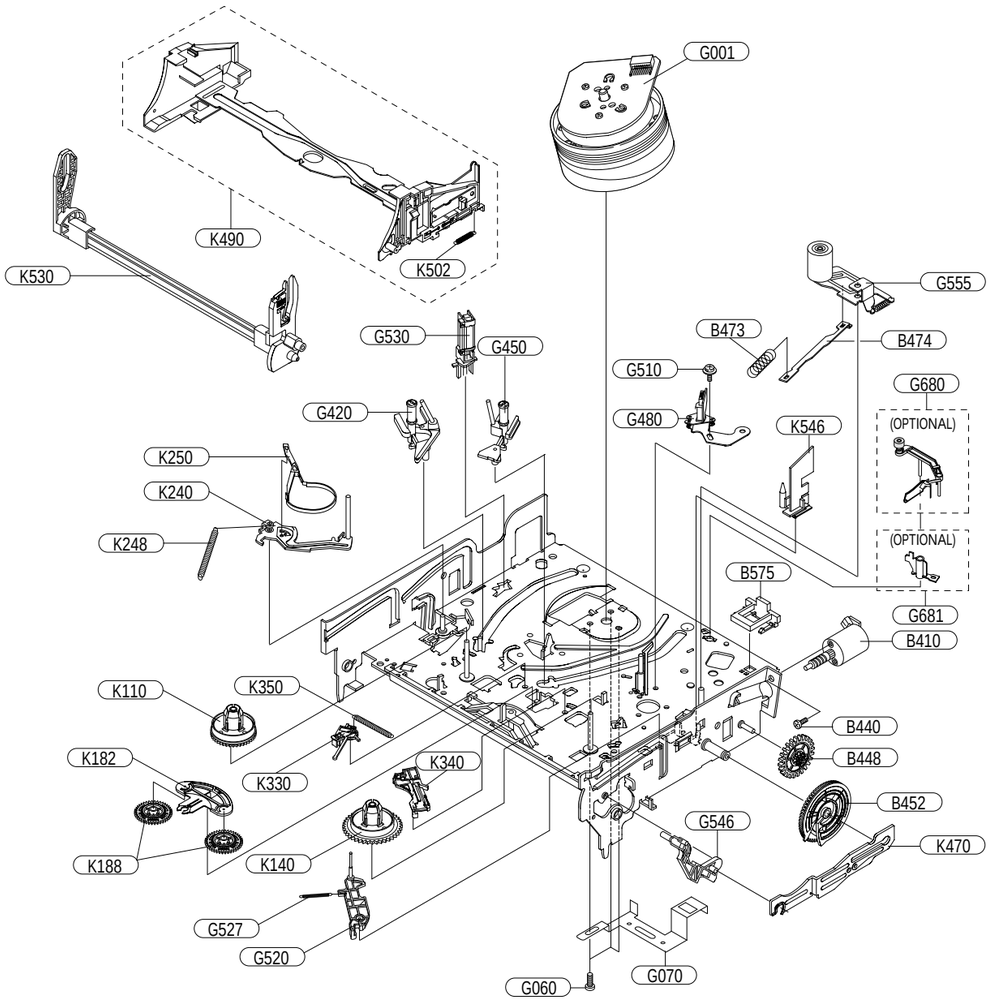
ASSY ACCESSORY

1	*	AA94-03758A	ASSY ACCESSORY;TB14A53X/RAD,C15C,NEWZEAL	
..2	A/R	AA42-00003A	ANT ROD;-,3S,720mm,ABS,UL/CSA,-	
..2		AA68-00897A	MANUAL USERS;-,-,ENG,ENG,W/P100(G),2,-,B	
..2		AA68-00711A	CARD WARRANTY;ALL,W/P100G,-,-,-,-,-	S.N.A
..2		AA26-90001C	TRANS-MATCHING;-,300ohm/75ohm,PAL,40-890	

REMOCON

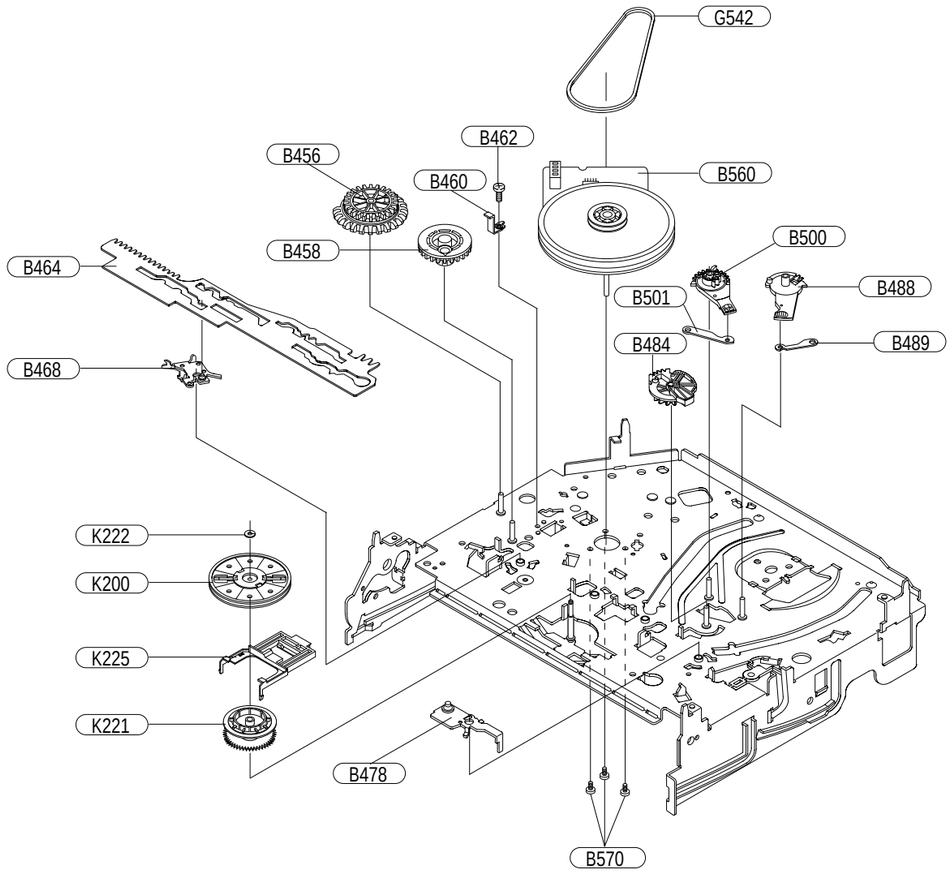
1	*	AA59-00107J	REMOCON;-,TM48,SPM738EE,39,L/GRAY,S/S,	

7-2 Mechanical Parts (Top Side)



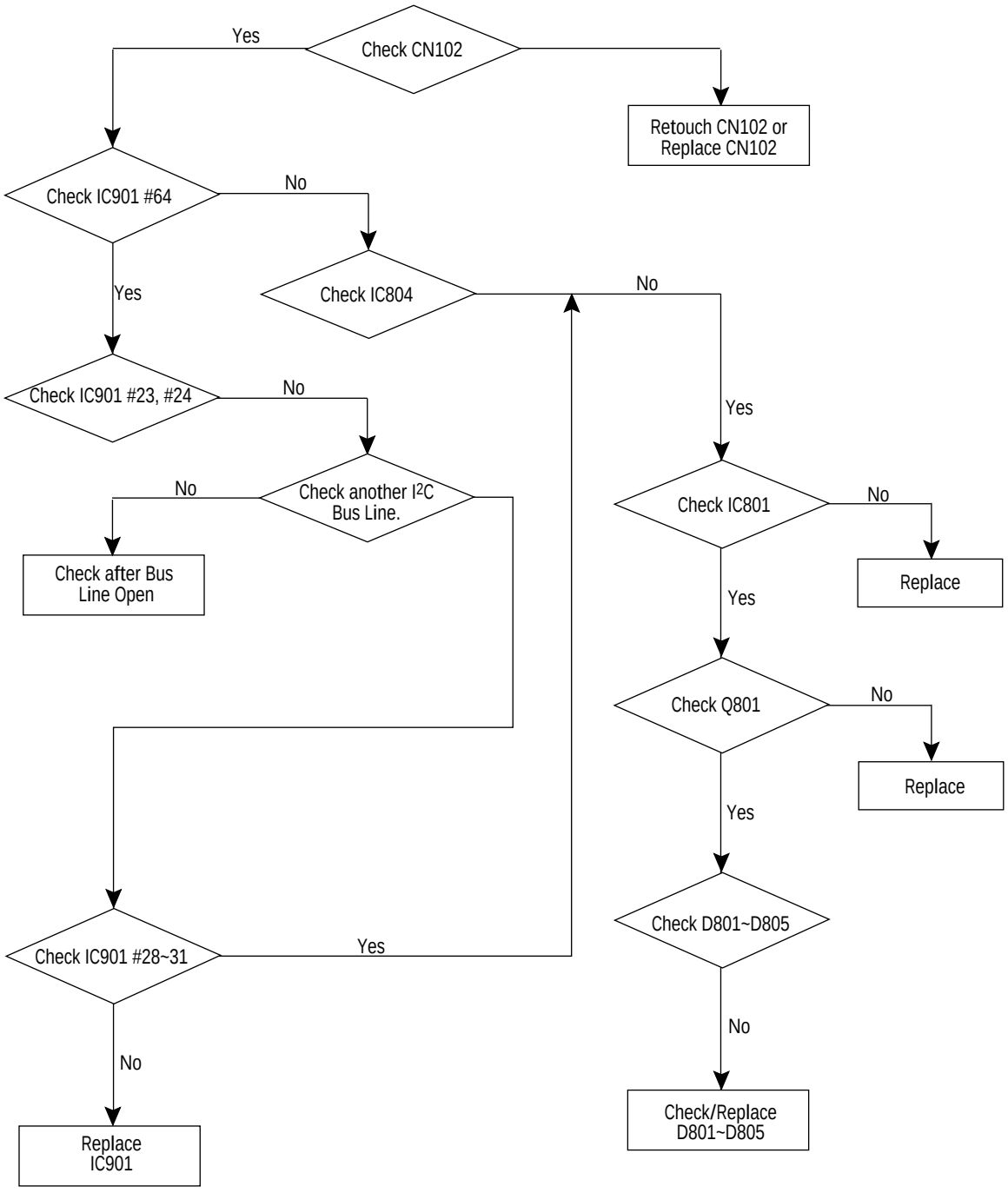
Loc. No	Parts No.	Description ; Specification	Remark
B410	AC31-00012A	MOTOR-LOADING ASSY;-,TS-10,-,-,-,-,-,-,-	
B440	AC60-10515A	SCREW-MACHINE;-,PH,+,-,M3,L3,ZPC,-,YEL	
B448	AC66-00008A	GEAR-WORM WHEEL;TS-10,POM,0.8,40,-,NAT,3	
B452	AC66-00011A	GEAR-FL CAM;TS-10,POM,0.8,59,-,BLK,48.48	
B473	AC61-00105A	SPRING-PINCH DRIVE;TS-10,SUS304-WPB,-,-,	
B474	AC61-30180A	PLATE-JOINT;-,SECC20/20,T0.8,-,X-9	
B575	AC47-00002A	DAMPER-CAPSTAN;TS-10,POM,-,-,BLACK	
G001	AC97-01212A	ASSY-CYLINDER;PALCTS10,4HD/DLC	
G060	6006-001092	SCREW-ASS? MACH;WS,PH,+,M3.0,L6.0,ZPC(Y	
G070	AC61-00161A	PLATE-GROUND DECK;TS-10,SPTE,T0.3,-	
G420	AC66-80142A	SLIDER-SUPPLY ASSY;-,X-9(TS),-,-,-,X-9	
G450	AC66-80141A	SLIDER-TAKE UP ASSY;-,X-9(TS),-,-,-,X-9	
G480	AC33-00009A	HEAD-ACE ASS?;-,PPS,TS-10,-,-	
G510	6006-001075	SCREW-ASS? TAPT;WSP,PH,+,M2.6,L5.0,ZPC(	
G520	AC66-00033A	LEVER-#9 GUIDE ASS?;TS-10,-,-,-,-,-,-	
G527	AC61-60553A	SPRING-#9 GUIDE;-,ES,SUS304-WPB,OD3.1,0.	
G530	AC33-00007A	HEAD-FE;-,-,HVFHPO043A,-,-	
G546	AC66-00005A	LEVER-FL DOOR;TS-10,POM,-,-,-,-,NAT,-	
G555	AC66-00032A	LEVER-UNIT PINCH ASS?;TS-10,-,-,-,-,-,-	
G680	AC66-00046A	LEVER-HEAD CLEANER ASS?;TS-10,POM+URETH	
G681	AC61-50686A	SLEEVE-HEAD CLEANER;-,POM,-,-,-,-,-,-,TS	
K110	AC66-10267A	REEL-DISK S;X-9,POM,-,-,-,-,-,-	
K140	AC66-10268A	REEL-DISK T;X-9,POM,-,-,-,-,-,-	
K182	AC66-30524A	LEVER-IDLER;-,POM,-,-,-,-,-,-	
K188	AC66-00039A	GEAR-IDLE;TS-10,PET K3372,0.5,-,-,NTR,28	
K240	AC66-00035A	LEVER-TENSION ASS?;TS-10,SECC E20/20+SU	
K248	AC61-00107A	SPRING-TENSION LEVER;TS-10,SUS304-WPB,-,	
K250	AC69-00104A	BAND-BRAKE ASS?;TS-10,-,-,-,-,-,-	
K330	AC66-30550A	LEVER-S.BRAKE ASSY;-,POM+SUS,-,-,-,X-9	
K340	AC66-30549A	LEVER-T.BRAKE ASSY;-,POM+SUS,-,-,-,X-9	
K350	AC61-00106A	SPRING-BRAKE;TS-10,SUS304-WPB,-,-,-,-,-,	
K470	AC66-00020A	SLIDER-FL DRIVE;TS-10,SECC E20/20,1.0,-,	
K490	AC61-00120A	HOLDER-FL CASS. ASS?;TS-10,-,-,-,-,-	
K502	AC61-60561A	SPRING-FL.LEVER-LR;-,ES,SUS304 WPB,PI2.7	
K530	AC66-00034A	LEVER-FL ARM ASS?;TS-10,-,-,-,-,-,-,-	
K546	AC61-50658A	GUIDE-CASS. DOOR;X-9,POM,-,NTR,-,-	

7-3 Mechanical Parts (Bottom Side)

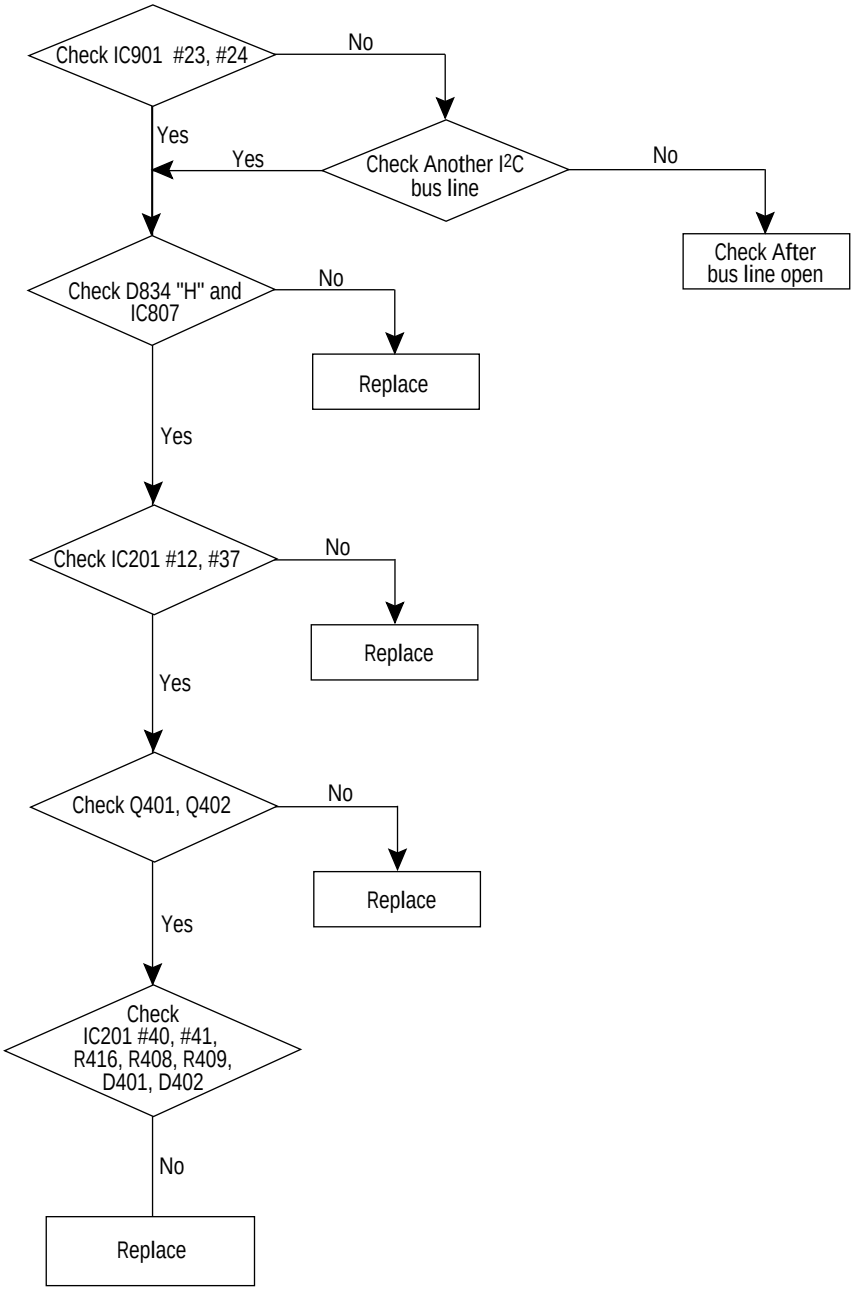


Loc. No	Parts No.	Description ; Specification	Remark
B456	AC66-00009A	GEAR-JOINT 1;TS-10,POM,1.5,17.5(22),-,NA	
B458	AC66-00012A	GEAR-JOINT 2;TS-10,POM,1.0,23,-,BLK,24.6	
B460	AC61-00090A	BRACKET-GEAR;TS-10,0.8,-,-	
B462	AC60-10517A	SCREW-TAP TITE;-,PH,+,-,M2.6,L5,ZPC,-,YE	
B464	AC66-00019A	SLIDER-CAM;TS-10,SECC E20/20,1.2,-,-,-,-	
B468	AC66-00017A	LEVER-PINCH DRIVE;TS-10,SECC E20/20,1.0	
B478	AC66-00016A	LEVER-TENSION DRIVE;TS-10,SECC E20/20,1	
B484	AC66-00030A	GEAR-LOADING DR. ASS?;TS-10,POM+SWPB,-,	
B488	AC66-00023A	LEVER-S LOADING;TS-10,POM,-,-,-,-,NAT,-	
B489	AC66-00021A	LINK-LOADING S;TS-10,SECC E20/20,0.8,-,-	
B500	AC66-00024A	LEVER-T LOADING;TS-10,POM,-,-,-,-,NAT,-	
B501	AC66-00022A	LINK-LOADING T;TS-10,SECC E20/20,0.8,-,-	
B560	AC31-00010A	MOTOR-CAPSTAN;-,SANKYO,-,-	
B570	AC60-10514A	SCREW-CAPSTAN;-,PH,+,M2.6,L6,-	
G542	AC66-60051A	BELT-PULLEY;-,5CM-70,2 * 2,-,71.3,-,X-9	
K200	AC61-21012A	HOLDER-CLUTCH ASSY;-,-,-,-,-,X-9	
K221	AC66-20581A	GEAR-CENTER ASSY;-,POM,M=0.5,-,HIGHT T.,	
K222	AC60-30306A	WASHER-SLIT;-,-,ID2.1,OD5.0,T0.5,-,POLYS	
K225	AC66-00006A	LEVER-UP DOWN;TS-10,POM,-,-,-,-,NAT,-	

6-2 No Power (No LED On)



6-3 No RF Picture / Sound



6-4 No Picture (Sound OK)

1 Check the Brightness, Contrast and Color adjustments

2. Check: AV Picture, Video Playback

3. See Video Block Diagram

6-5 No Sound (Picture OK)

1. Check the Volume adjustment level.

2. Check AV Video, Sound Playback

3. See Audio Block Diagram

6-6 RF Weak Signal (Playback, AV Mode OK)

1. Check Tuner (TU01S) B+. Check: 9V (IC807)
   33V (DZ803). Check 5V (IC902S)

2. Pre AMP (HC001S), B+. Check: 9V (IC807)

6-7 Recording Defect

1. CN101 Check : Retouch

2. 2nd Tuner (TU02S) B+. Check : 33V(DZ803)
   5V (IC808)

3. 2nd If : Check 9V (IC806), Video out, Audio out

4. Video Defect : IC701 Check

5. Audio Defect : IC701 Check

6. Standby Recording Defect, IC901S #5 Line: Check (D834, IC804, IC807, IC806)

7. VPS (PDC) Recording Defect: Check IC901S, #4

6-8 No Color

1. Check the Color Adjustment level
2. Check the Sandcastle Pulse Line : IC201S #41
3. Check the R-Y, B-Y Line : IC201S #29~#32
4. Check crystal : X202 (4.43361MHz)

6-9 No Vertical SCAN

1. Check R410, D404
2. Check IC301, #7
3. Check IC201S #46, #47 Line
4. Check DY Connector

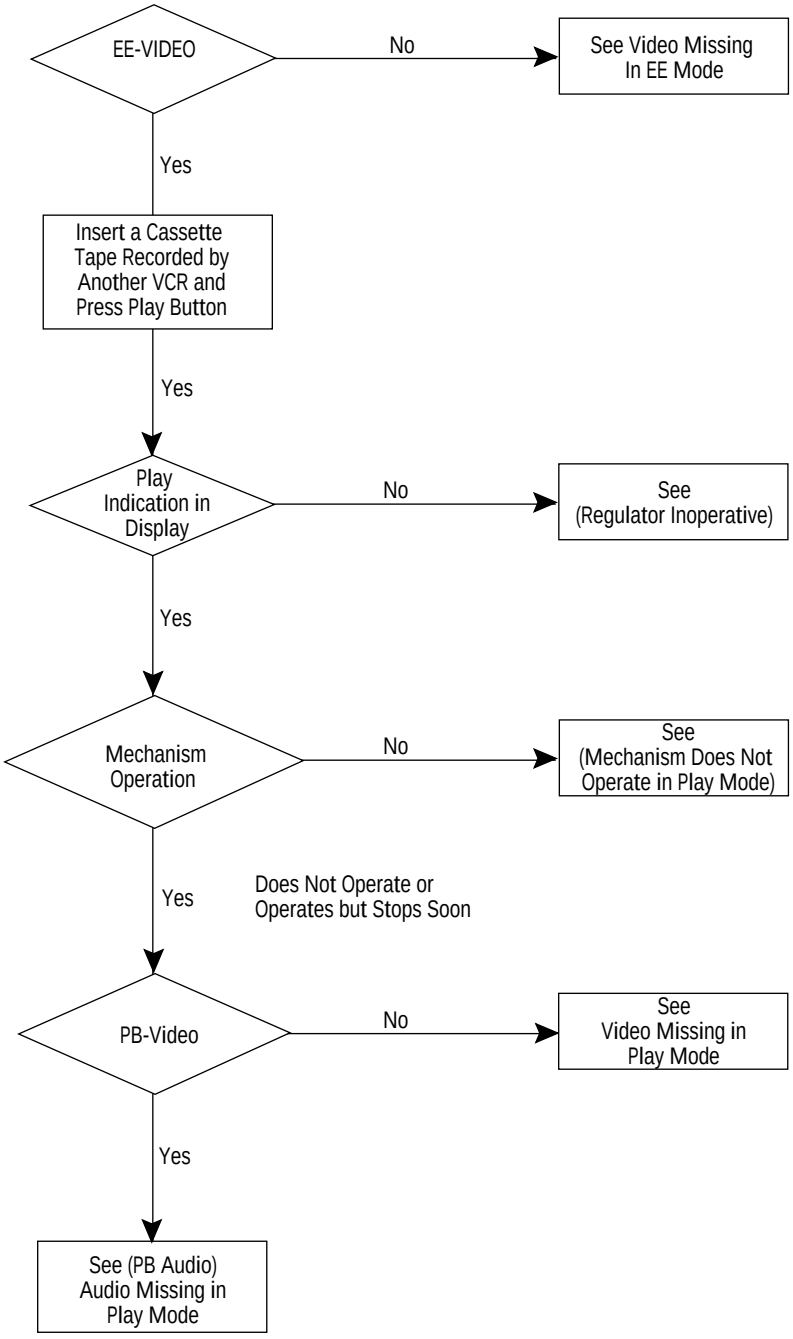
6-10 Horizontal Size

1. Check C402 , C403 , L401 , L404

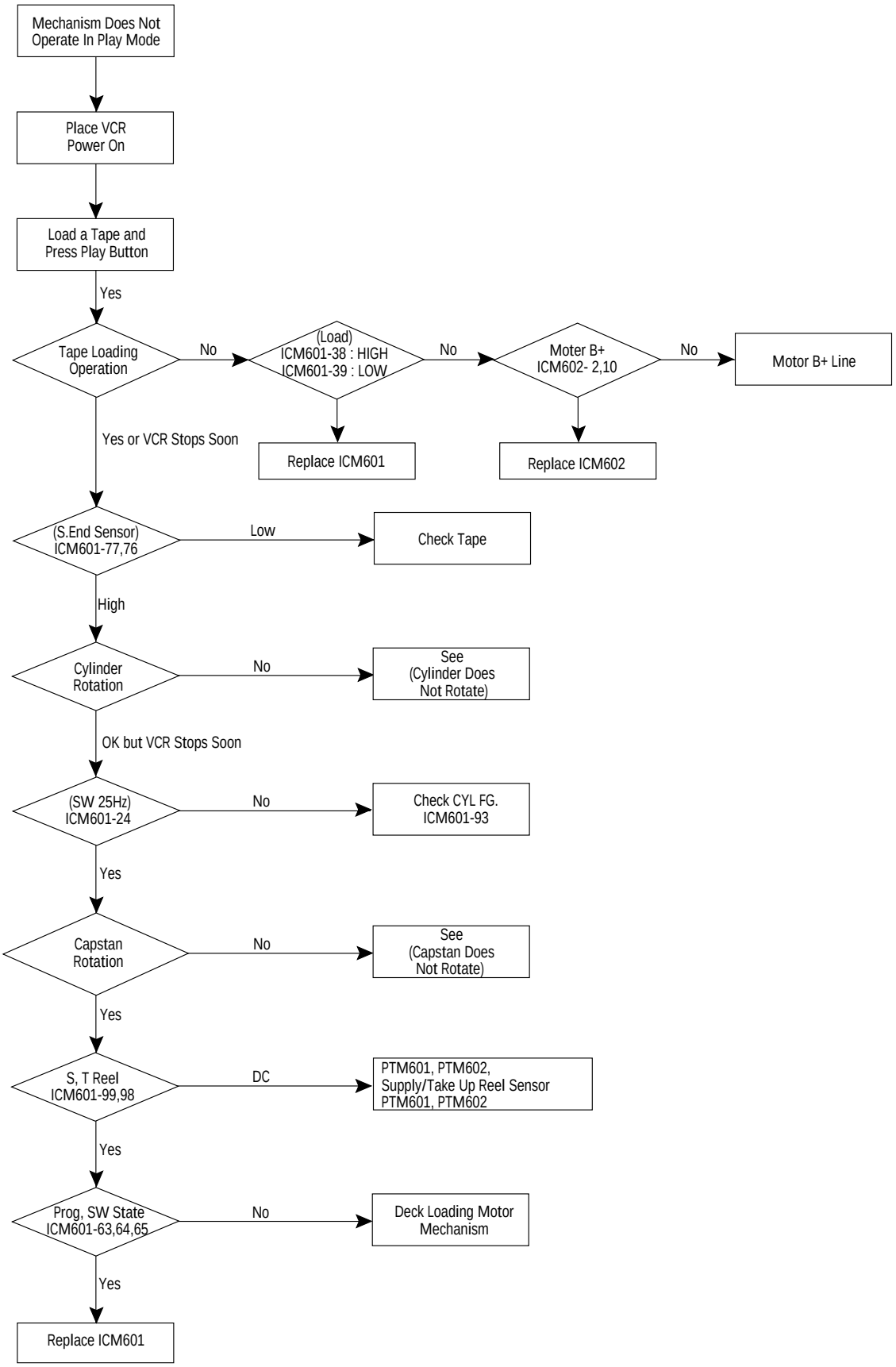
6-11 On-Screen Display Missing

1. Check IC901S #2
   (D905, Q901, DZ901)
2. Check IC901S #37 (R949, IC903)

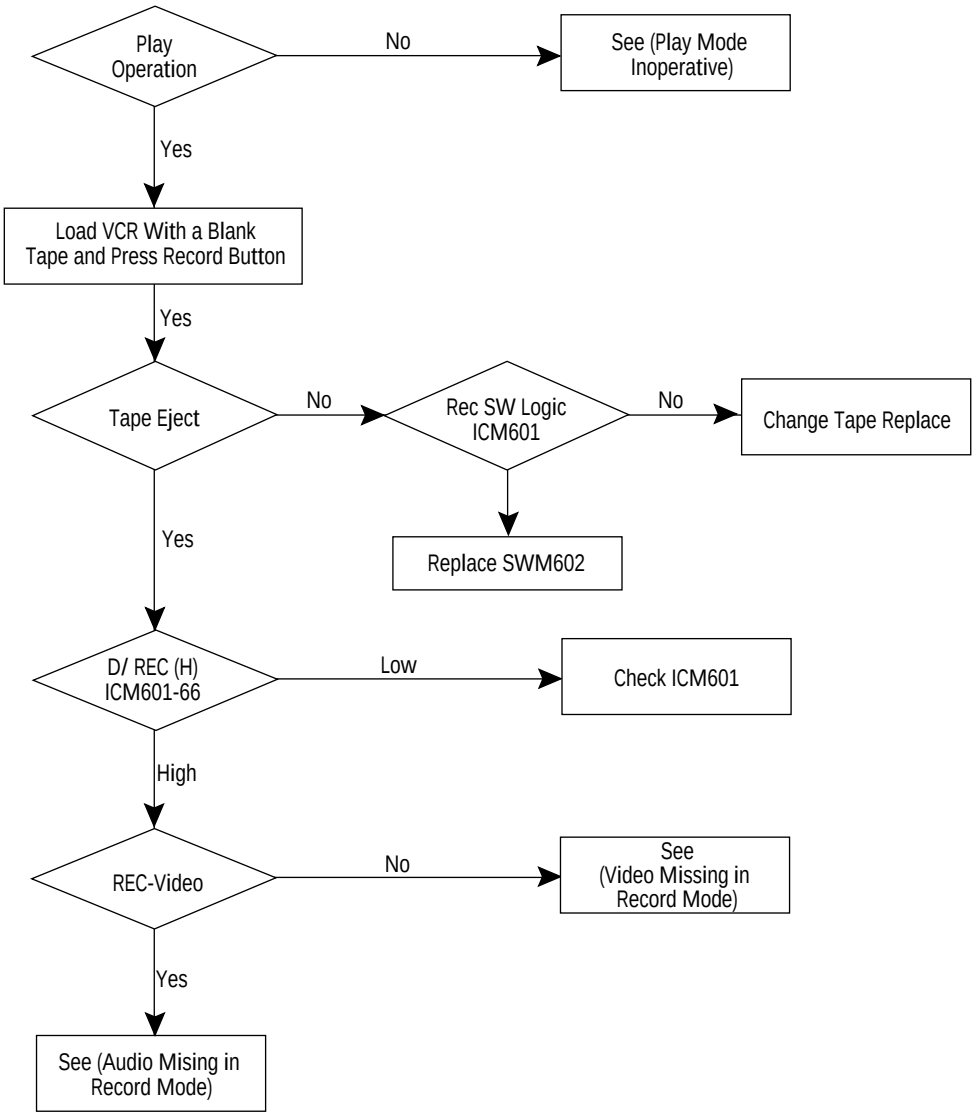
6-12 Play Mode Inoperative



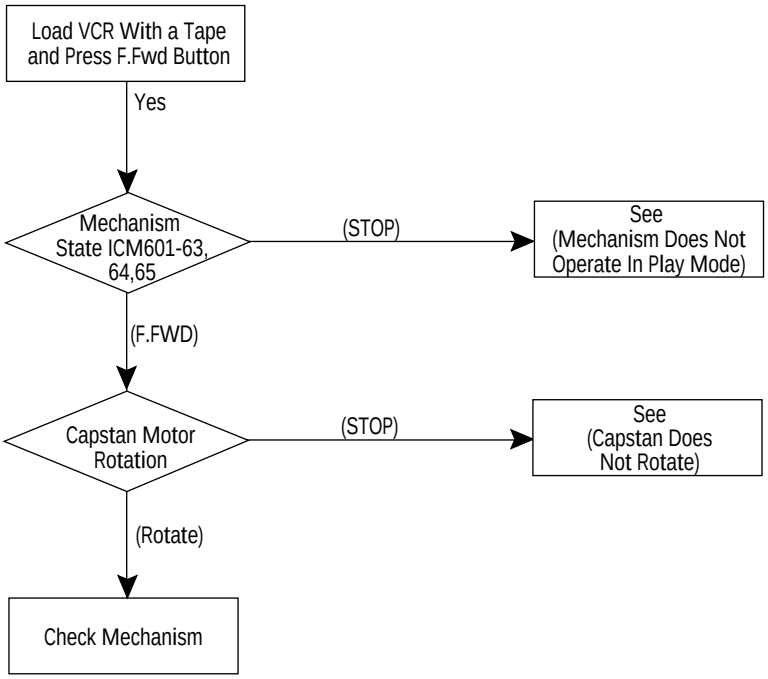
6-13 Mechanism Does Not Operate In Play Mode



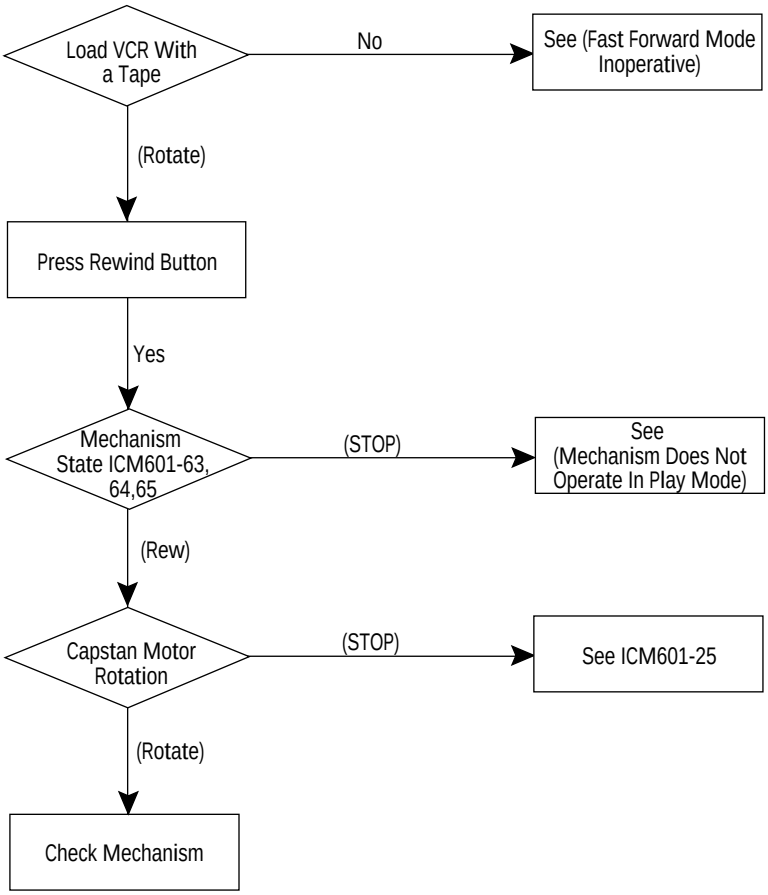
6-14 Record Mode Inoperative



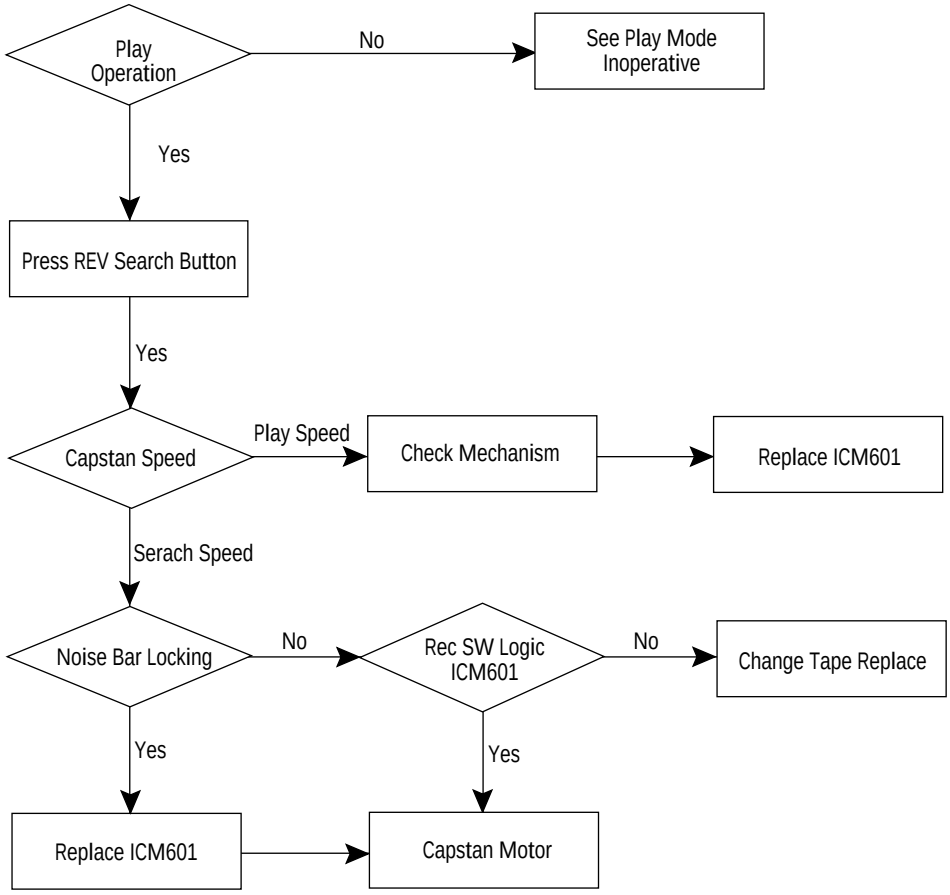
6-15 Fast Forward Mode Inoperative



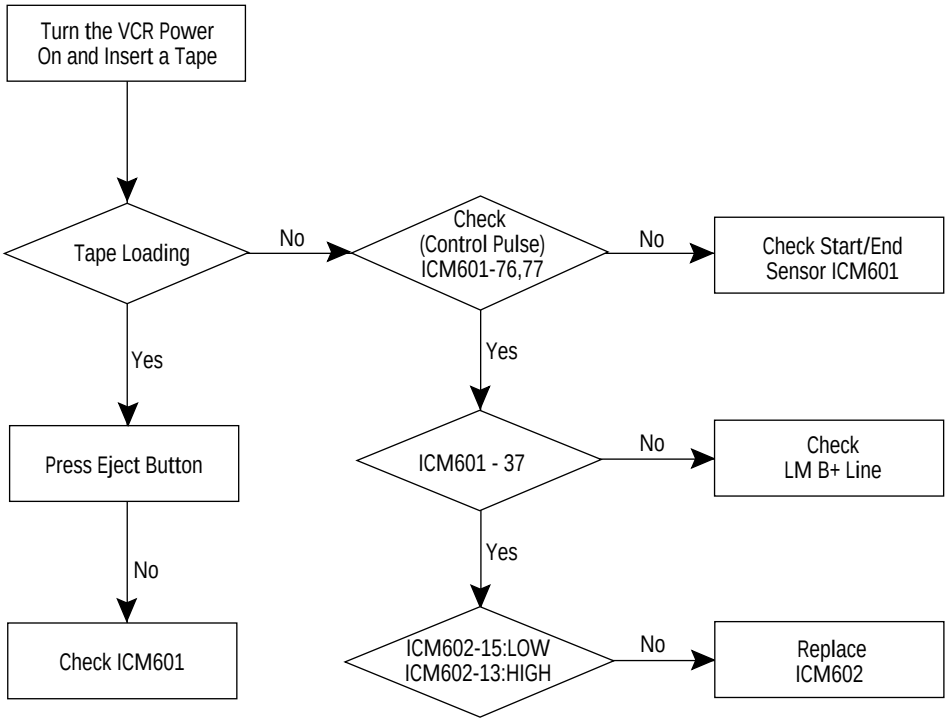
6-16 Rewind Mode Inoperative



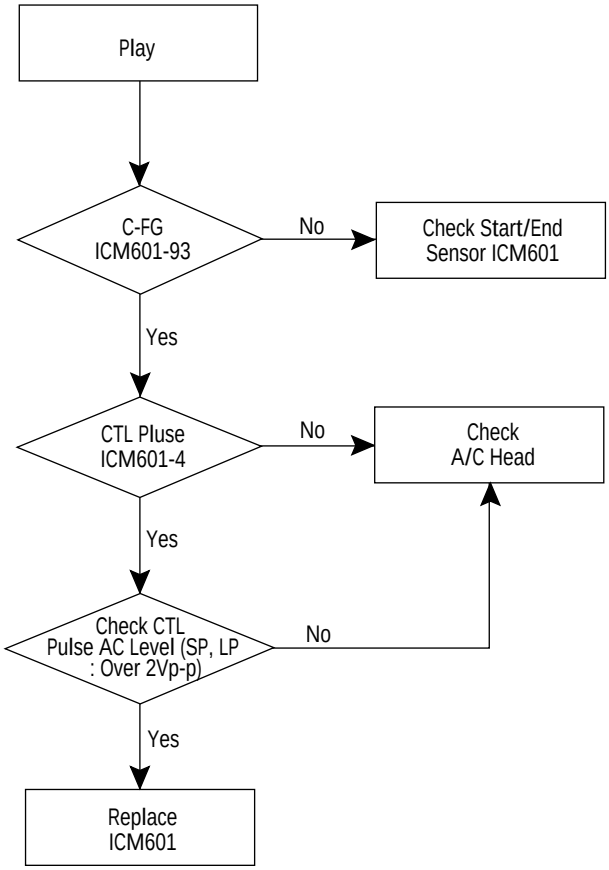
6-17 Rev Search Mode Inoperative



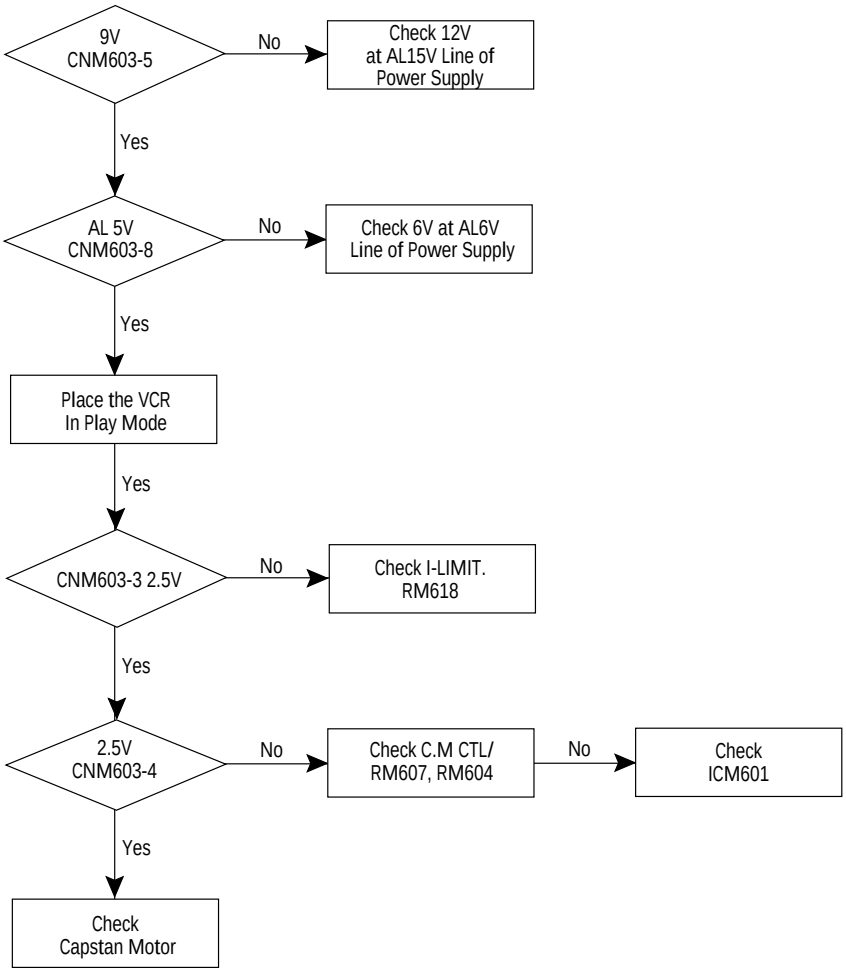
6-18 Cassette Loading Mechanism Does Not Operate



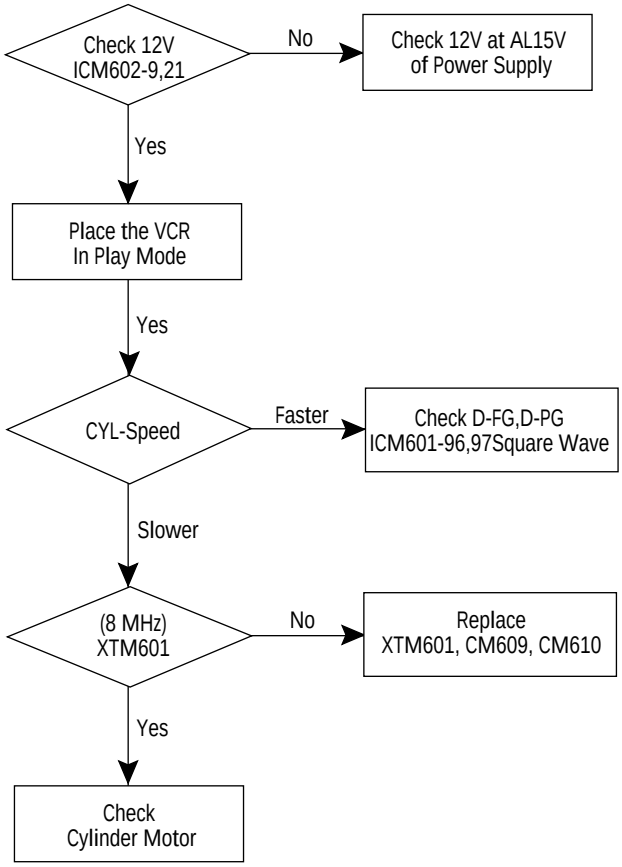
6-19 No Servo Lock



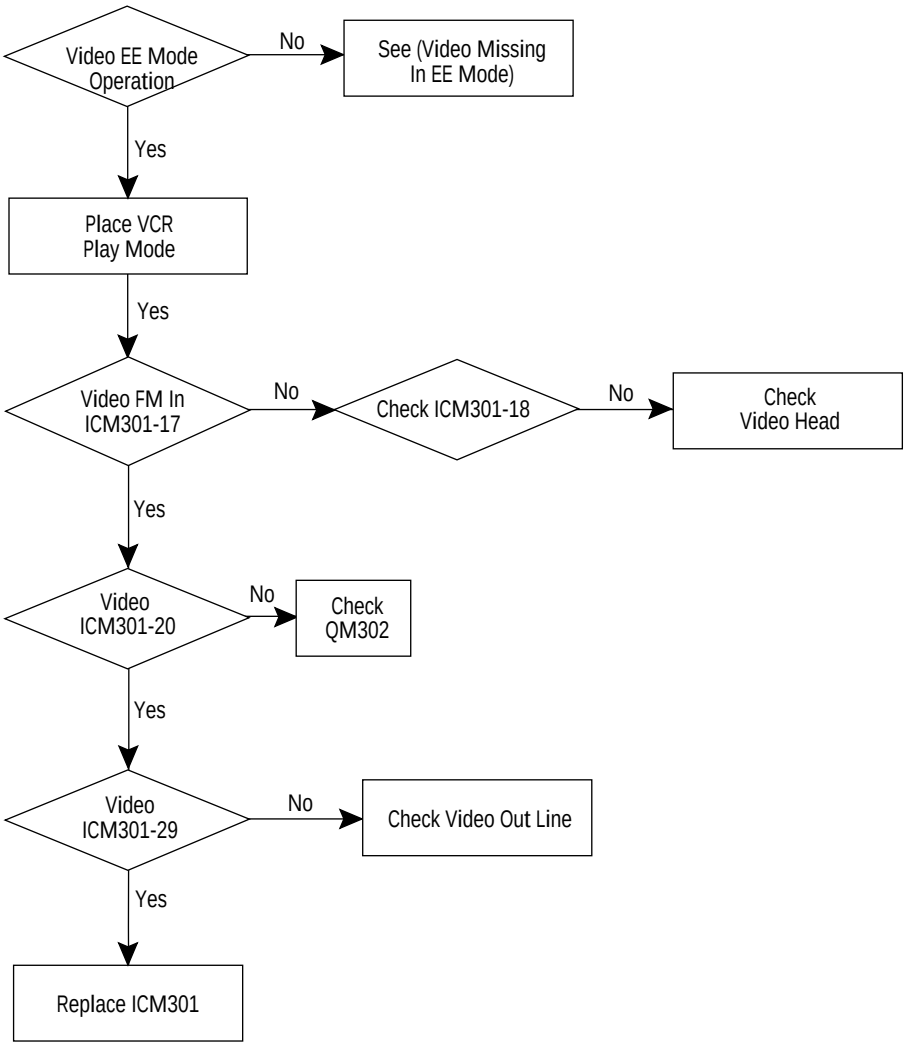
6-20 Capstan Does Not Rotate



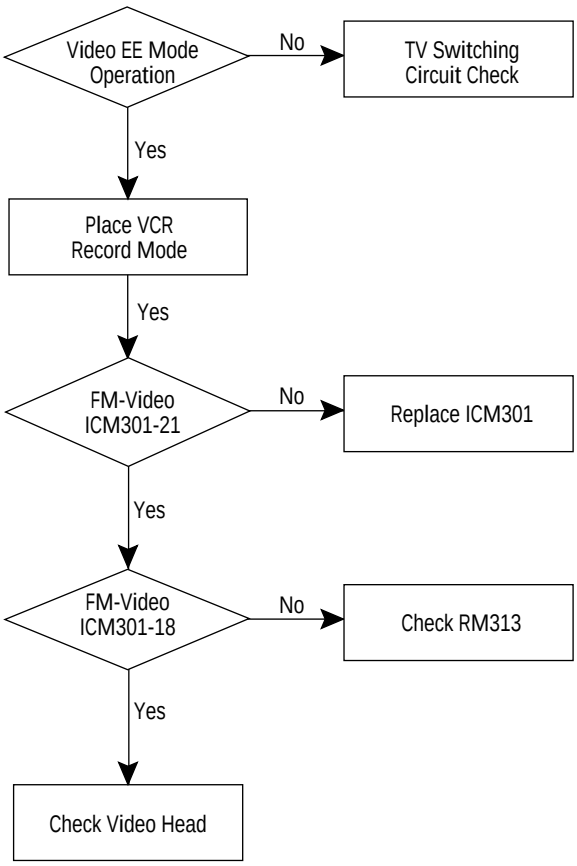
6-21 Drum Does Not Rotate



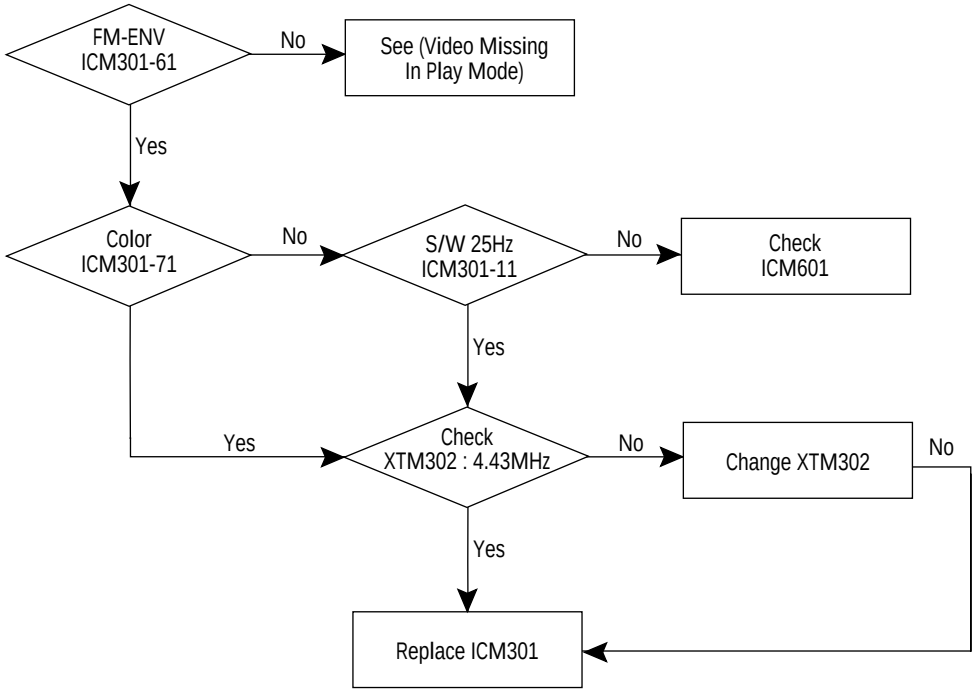
6-22 Video Missing In Play Mode



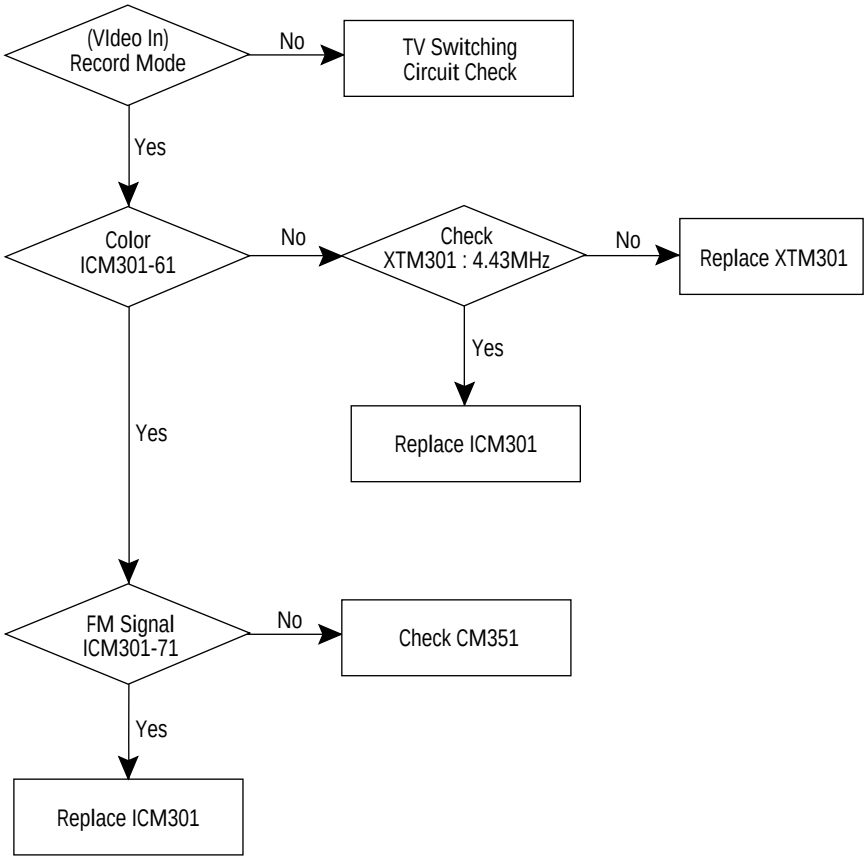
6-23 Video Missing In Record Mode



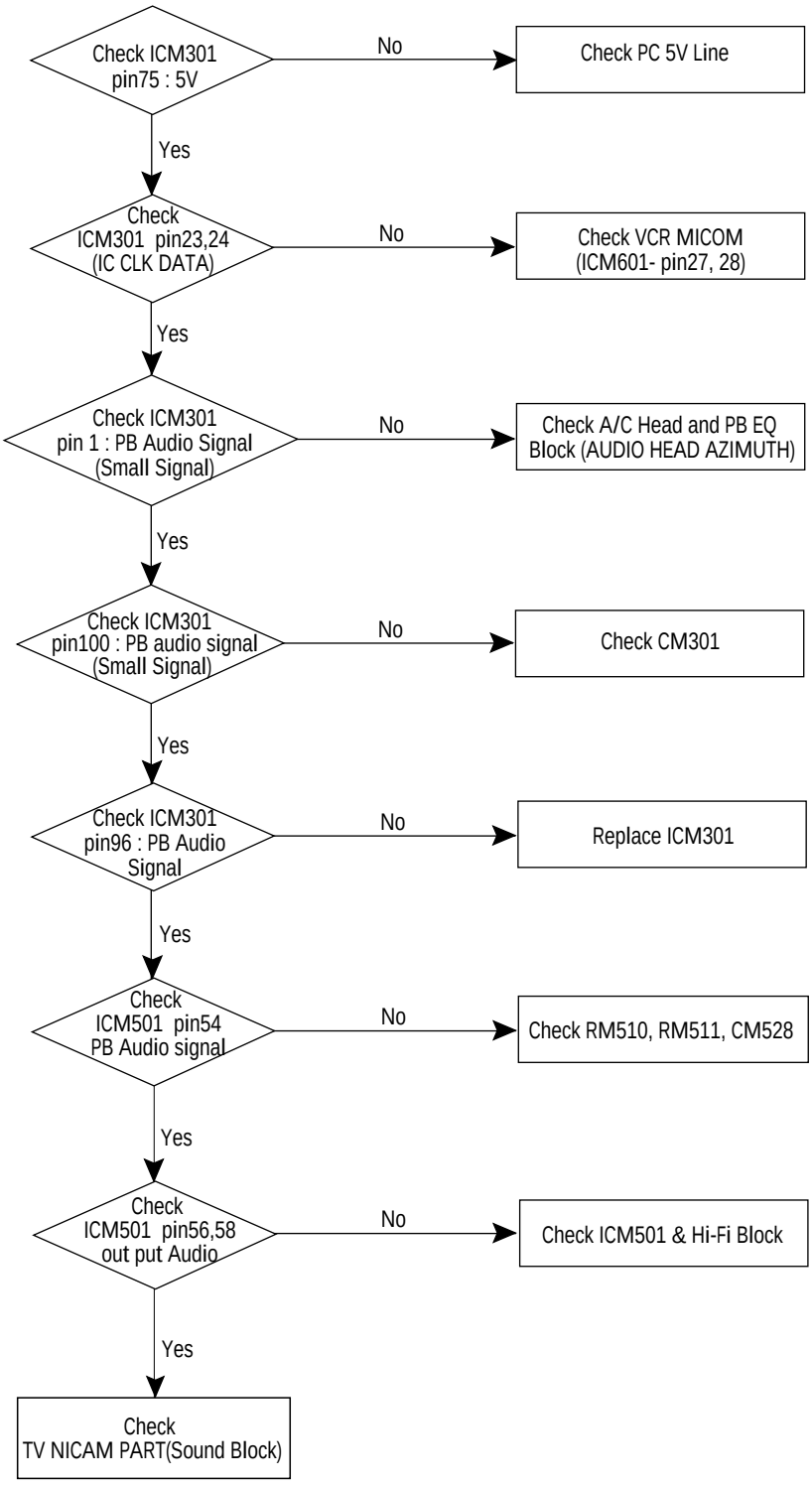
6-24 Color Missing In Play Mode



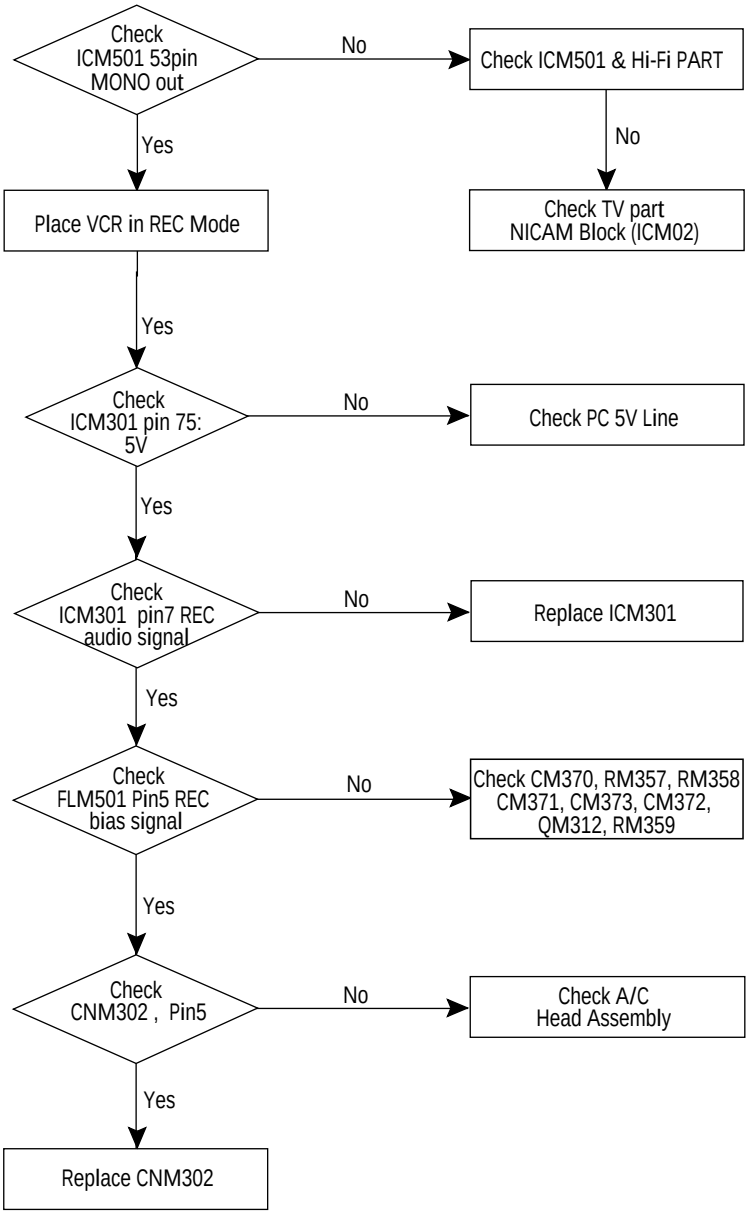
6-25 Color Missing In Record Mode



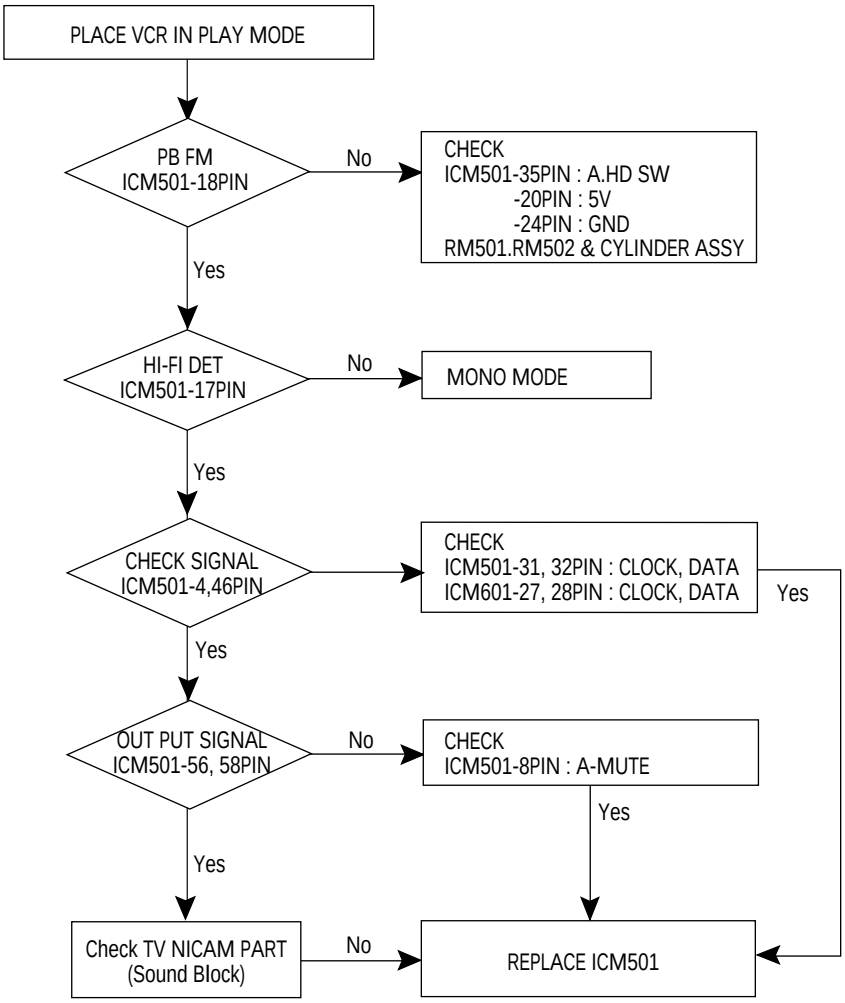
6-26 Audio Signal Missing in Play Mode (MONO MODE)



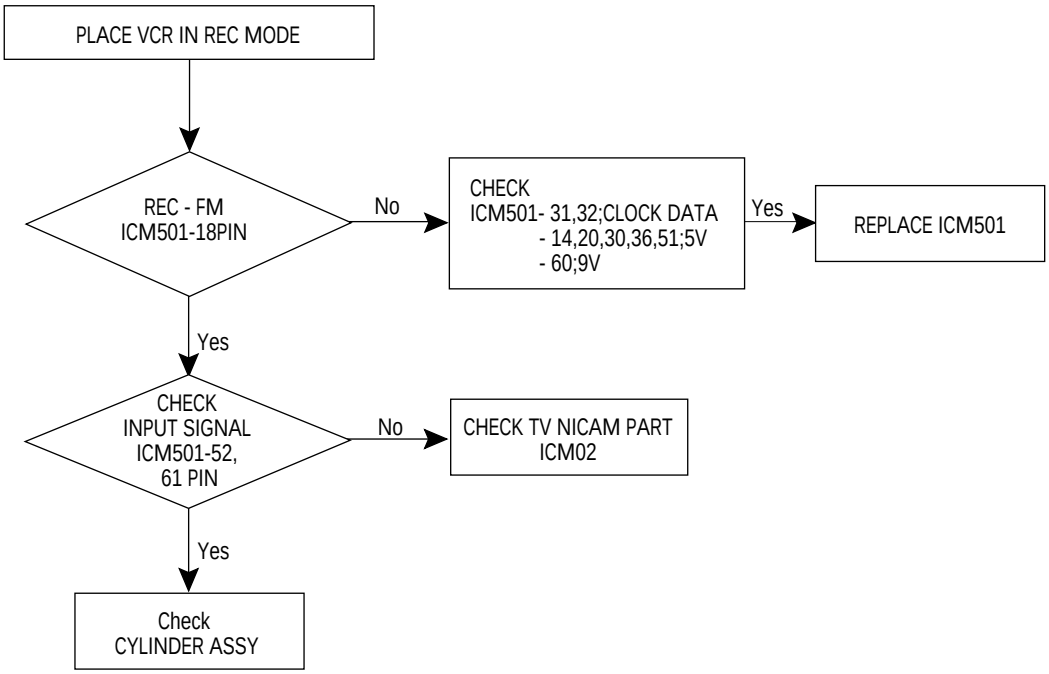
6-27 Audio Signal Missing After Recording (MONO MODE)



6-28 Audio Missing In Play Mode (Hi-Fi)



6-29 Audio Missing In Rec Mode (Hi-Fi)



MEMO

5. Alignment and Adjustments (Electrical)

5-1 Preadjustment

5-1-1 Factory Mode

1. Do not attempt these adjustments in the Video Mode.

2. The Factory Mode adjustments are necessary when either the EEPROM (IC902S) or the CRT is replaced.

3. Do not tamper with the “Adjustment” screen of the Factory Mode menu. This screen is intended only for factory use.

5-1-2 When EEPROM (IC902S) Is Replaced

1. When IC902S is replaced all adjustment data revert to initial values. It is necessary to re-program this data.

2. After IC902S is replaced, warm up the TV for 10 seconds.

5-1-3 When CRT Is Replaced

Make the following adjustments after setting up purity and convergence:

White Balance
Sub-Brightness
Vertical Center
Vertical Size
Horizontal Size

5-2 Factory (“Service”) Mode

5-2-1 Procedure for the “Adjustment” Mode

1. This mode uses the standard remote control. The Service Mode is activated by: (1) pressing the “FACTORY” service key on the local-keyboard, or (2) by entering the following remote-control sequence (within 2 seconds):

   STAND-BY →DISPLAY →MENU→ MUTE→ POWER ON

2. The “SERVICE (FACTORY)” message will be displayed. The Service Mode has three components: Adjustment, Option and Reset.

3. Access the Adjustment Mode by pressing the “VOLUME” keys (Up or Down). The adjustment parameters are listed in the accompanying table, and selected by pressing the CHANNEL keys (▲,▼).

4. Selection sequences for the PAL/SECAM B/G, L/systems:

   down or up key:
   AGC>TXP>AFW>SBT>SCT>SCR>STT>RG>GG>BG>TCT>SC>SL>PVS>PHS>NVS>NHS>CDL>BKS

5. The VOLUME keys increase or decrease the adjustment values, (stored in the non-volatile memory) when Adjustment Mode is cancelled.

5-2-2 Main Adjustment Parameters

Table 5-1 Main Adjustment Parameters

FUNCTION	OSD ABBREVIATION	RANGE	INITIAL DATA
AUTO GAIN CONTROL	AGC	0 ~ 63 STEP	12
TELETEXT POSMON	TXP	0 ~ 13 STEP	5
AUTO FREQUENCY WINDOW	AFW	0 ~ 01 STEP	00
SUB BRIGHT	SBT	0 ~ 13 STEP	6
SUB CONTRAST	SCT	0 ~ 13 STEP	14" : 06 20/21" : 10
SUB COLOR	SCR	0 ~ 13 STEP	6
SUB TINT	STT	0 ~ 13 STEP	9
RED GAIN	RG	0 ~ 63 STEP	38
GREEN GAIN	GG	0 ~ 63 STEP	32
BLUE GAIN	BG	0 ~ 63 STEP	32
TELETEXT CONTRAST	TCT	0 ~ 38 STEP	00
S-CORRECTION	SC	0 ~ 63 STEP	14/20" : 00 21" : 11
VERTICAL SLOPE	SL	0 ~ 63 STEP	30
PAL VERTICAL SHIFT	PVS	0 ~ 63 STEP	27
PAL HORIZKONTAL SHIFT	PHS	0 ~ 63 STEP	40
NTSC VERTICAL SHIFT	NVS	0 ~ 63 STEP	38
NTSC HORIZONTAL SHIFT	NHS	0 ~ 63 STEP	22
CATHOD DRIVE LEVEL	CDL	0 ~ 07 STEP	14" : 03 20/21" : 06
BLACK STRETCHER	BKS	0 ~ 01 STEP	0

NOTE : PVS, PVA, PHS, NVS, NVA,NHS parameters must be aligned using both the 50 Hz and 60 Hz vertical-field rates.

5-2-3 AGING Mode (Reference Only)

This pattern is used for pre-heating the CRT during manufacturing--it is accessed in the factory by twice pressing the "FACTORY" key .

Even if the TV power is cut off, the Aging Mode is not cancelled.
The "AGING" marking is displayed on the screen.
The AGING mode is cancelled by repressing the "FACTORY" key.

5-2-4 Option

BIT	ITEM	0
1	AUDIO MODE	NICAM/MONO
2	SYSTEM	CF/CI/CK/CX/CB/CII
3	ATS OPTION	ON/OFF
4	TUNER	2/1
5	G-CODE	SHOWVIEW/VIDEO PLUS/NONE
6	VPS/PDC	VSP/PDC/NONE
7	AUTO CLOCK	ON/OFF
8	S-MODULATION	54%/80%/100%

5-3 Reset

The Reset Mode is used during factory inspection.
Function Reset : After Factory Reset, the following items revert to their initial values.

1. Volume 10
2. Program Channel 1
3. P-STD CUSTOM
4. Auto Power OFF
5. NR OFF
6. Reserved Timer Recording ALL CLEAR
7. Skip (Store / Clear) ALL CLEAR

Caution : When the EEPROM is replaced, all items revert to their initial values.

5-4 Other Adjustments

5-4-1 General

1. Usually, a color TV needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.

2. The picture should have good black and white details. There should be no objectionable color shading; if color shading is present, perform the purity and convergence adjustments described below.

3. Use the specified test equipment or its equivalent.

4. Correct impedance matching is essential.

5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test results.

6. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.

7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.

8. To protect against shock hazard, use an isolation transformer.

5-4-2 Automatic Degaussing

A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary. But the receiver must be properly degaussed upon installation.

The degaussing coil operates for about 1 second after the power is switched ON. If the set has been moved or turned in a different direction, disconnect its AC power for at least 10 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result. If this happens, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube and the sides and front of the receiver. Slowly withdraw the coil to a distance of about 6 feet before removing power.

5-4-3 High Voltage Check

CAUTION: There is no high voltage adjustment on this chassis. The B+ power supply must be set to +125 volts (Full color bar input and normal picture level).

1. Connect a digital voltmeter to the second anode of the picture tube.

2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).

3. The high voltage should not exceed 27.5KV.

4. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 27.5KV under any conditions.

5-4-4 FOCUS Adjustment

1. Input a black and white signal.
2. Adjust the tuning control for the clearest picture.
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

5-4-5 Screen Adjustment

1. Turn to the ACTIVE channel.
2. Adjust the VR screen for a normal picture is (no blooming or flyback line).
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

5-4-6 Purity Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Plug in the CRT deflection yoke and tighten the clamp screw.
3. Plug the convergence yoke into the CRT and set in as shown in Fig. 5-1.
4. Input a black and white signal.
5. Fully demagnetize the receive by applying an external degaussing coil.
6. Turn the CONTRAST and BRIGHTNESS controls to maximum.
7. Loosen the clamp screw holding the yoke. Slide the yoke backward or forward to provide vertical green belt. (Fig. 5-2).
8. Tighten the convergence yoke.
9. Slowly move the deflection yoke forward, and adjust for the best overall green screen.
10. Temporarily tighten the deflection yoke.
11. Produce blue and red rasters by adjusting the low-light controls. Check for good purity in each field.
12. Tighten the deflection yoke.

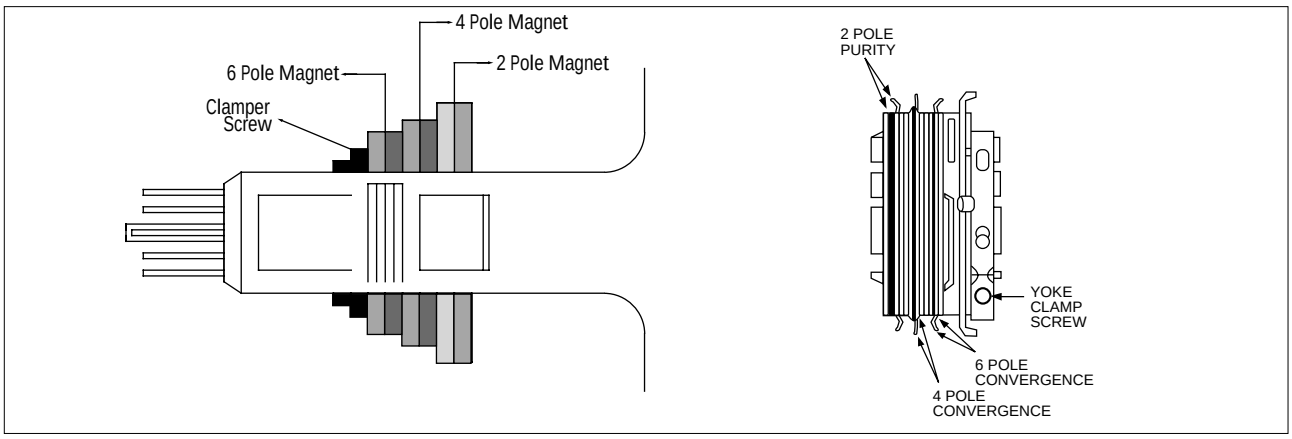


Fig. 5 -1 Convergence Magnet Assembly

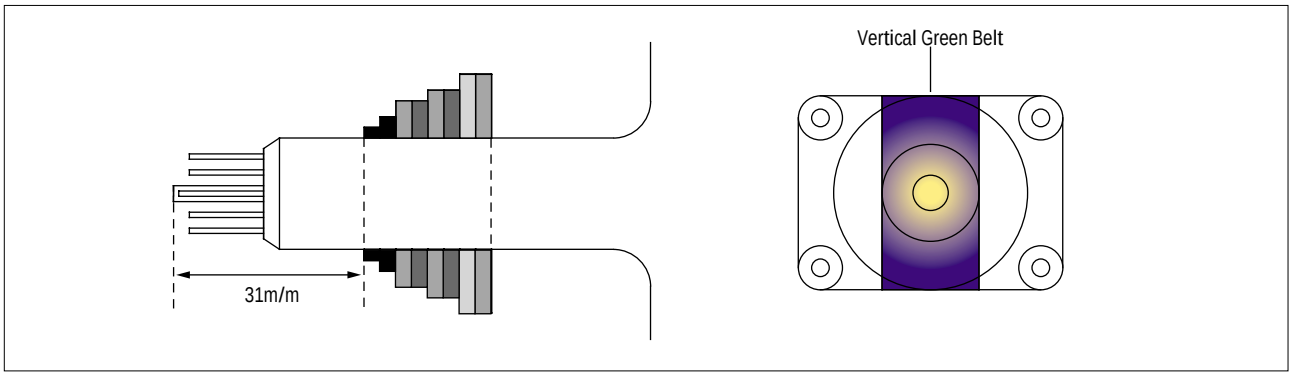


Fig. 5-2 Center Convergence Adjustment

5-4-7 White Balance Adjustment

5-4-7 (A) HIGH-LIGHT ADJUSTMENT

1. Input either a Lion Head or a “pure white” pattern.
2. Warm up the TV for 30 minutes.
3. Check the data in the Service Mode
4. Adjust RG, BG in the Factory Mode.

5-4-7 (B) LOW-LIGHT ADJUSTMENT

1. Automatically accomplished during the high-light adjustment.

5-4-8 Center Convergence Adjustment

1. Warm up the receiver for at least 20 minutes.

2. Adjust the two tabs of the 4 pole magnets to change the angle between them. Superimpose the red and blue vertical lines in the center area of the screen.

3. Adjust the Brightness and Contrast controls for a well defined picture.

4. Adjust the two-tab pairs of the 4 pole magnets, and change the angle between them. Superimpose the red and the blue vertical lines in the center area of the screen.

5. Turn the both tabs at the same time, keeping the angle constant, and superimpose the red and blue horizontal line in the center of the screen.

6. Adjust the two-tab pairs of the 6-pole magnets to superimpose the red and blue line onto the green. (Changing the angle affects the vertical lines, and rotating both magnets affects the horizontal lines.)

7. Repeat adjustments 2~6, if necessary.

8. Since the 4-pole magnets and 6-pole magnets interact, the dot movement is complex (Fig. 5-3).

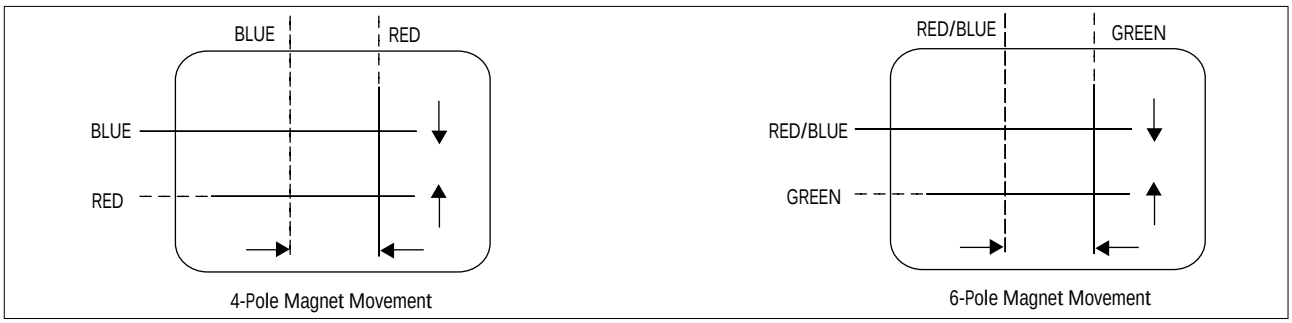


Fig 5-3 Center Convergence Adjustment

5-4-9 Dual Tuner AFT Adjustment

Test Equipment

1. TV Generator (PM5518,PM5418,ETC.)
2. DC VOLTMETER

1. Connect DC Voltmeter to AFT terminal of TUNER IF-MODULE.
2. After selecting P00, input to IF1 terminal of TU002 (38.9 MHz Using PM5518)
3. After selecting P00, set to 2.5V ± 0.2V (Using FRANCE : T101, PAL / SCAM B / G,I,D / K : L102)

5-5 Electrical Adjustment (VCR Section)

5-5-1 Preparation

Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustment only after all repairs and replacements have been com pleted. Also, do not attempt these adjustments unless the proper equipment is available.

5-5-2 Required Test Equipment

1. Color Television or Monitor
2. Oscilloscope : Wide-band, dual-trace, trig-gered delayed sweep.
3. DC Voltmeter
4. TV CH Generator
5. Attenuator
6. Recording tape. (Blank tape)
7. Pattern Generator : PAL color bar. 100% White.

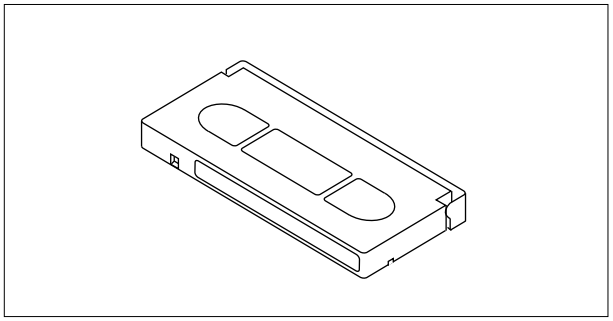


Fig. 5-4 Alignment Tape

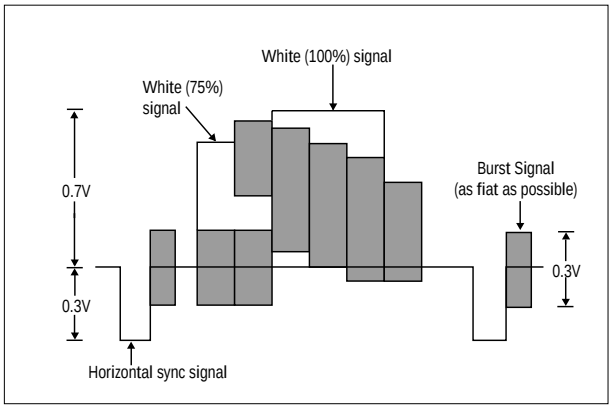


Fig. 5-5 Color bar signal of pattern generator

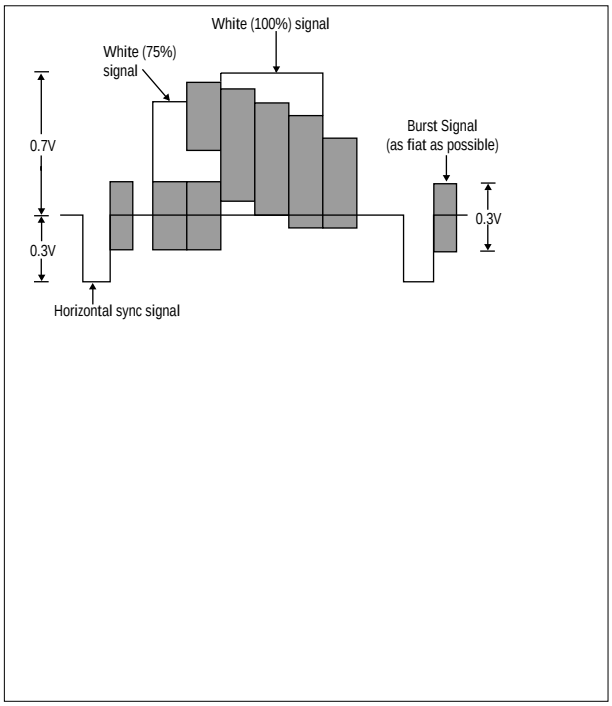
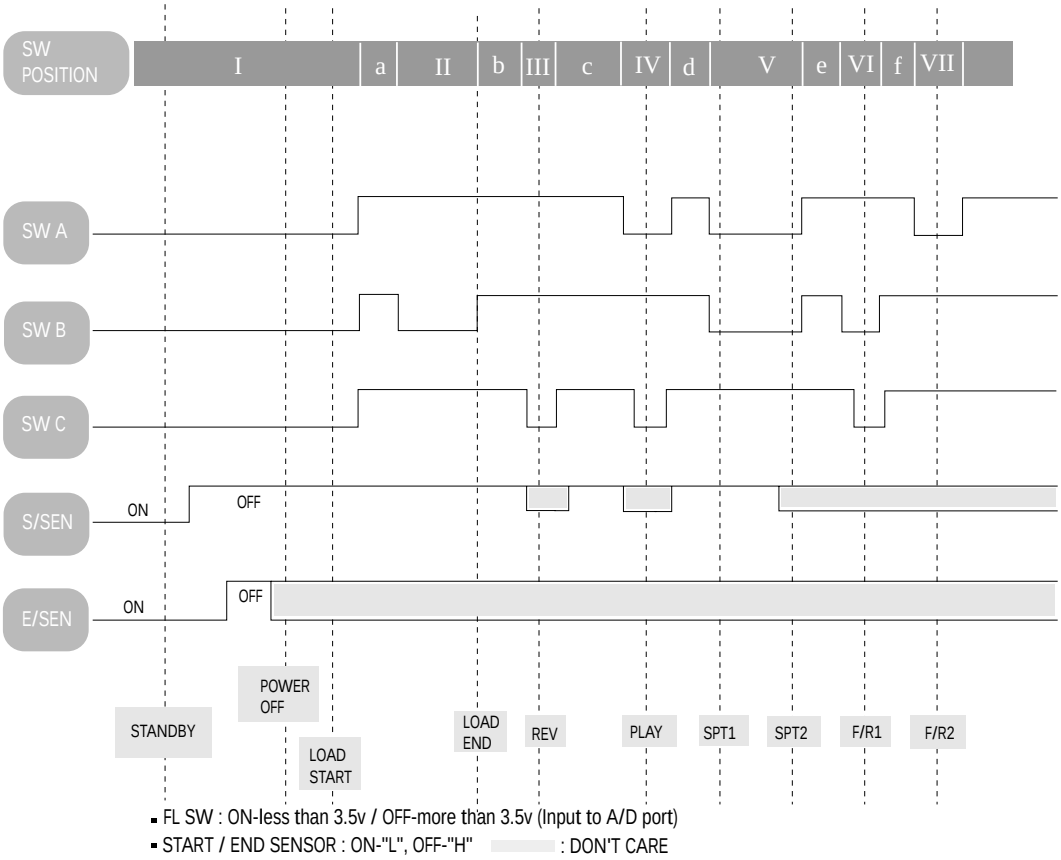


Fig. 5-6 Color bar signal of alignment tape (75% Color Bars)

5-5-3 PROGRAM SW



- FL SW : ON-less than 3.5v / OFF-more than 3.5v (Input to A/D port)
- START / END SENSOR : ON-"L", OFF-"H" : DON'T CARE

POSITION	PROGRAM S/W			TAPE SEN		OPERATION MODE
	A	B	C	S	F	
STANBY	0	0	0	0	0	Eject
POWER OFF	0	0	0	1	X	Unload POWER OFF
LOADING START	0	0	0	1	X	(Tape loading start point)
LOADING END	1	0 ->1	1	1	X	(Tape loading end point)
REV	1	1	0	X	X	Reverse Picture Ssarch, Reverse SLOW
PLAY	0	1	0	X	X	Play, Rec,F-PS,Still,SLOW,F-ADV
STOP1	0	0	1	1	X	Stop (Play position 5 Min. over)
STOP 2	0	0	1	X	X	(MAIN Break ON MODE)
FF / REW 1	1	0	0	X	X	High speed Rew, Low speed FF
FF / REW 2	0	1	1	X	X	High speed FF, Low speed Rew

X : DON'T CARE

5-5-4 HI-FI AUDIO BLOCK PART LIST

NO	LOC. NO	CODE-NO	PARTS	SPEC	HI FI	MONO	REMARKS
1	CNM301	3708-001165	WAFER	6P	X	O	CHANGE
		3708-000391	WAFER	10P	O	X	CHANGE
2	RM515	2001-000947	R	7.5K	X	O	CHANGE
		2001-000878	R	6.2K	O	X	CHANGE
3	RM509	2001-000947	R	7.5K	X	O	CHANGE
		2001-000878	R	6.2K	O	X	CHANGE
4	CM384	2202-000830	C-AXIAL	82pF	O	X	CHANGE
		2202-000205	C-AXIAL	22pF	X	O	CHANGE
5	CM392	2401-000603	C-ELEC	1uF,50V	X	O	MONO
6	CM393	2202-000632	C-AXIAL	104	X	O	MONO
7	QM317	0501-000389	TR	KSC815-Y	X	O	MONO
8	RM377	2001-000273	R	100K	X	O	MONO
9	RM378	2001-000995	R	820	X	O	MONO
10	JM176	3812-000219	WIRE	JUMPER	X	O	MONO
11	JM242	3812-000219	WIRE	JUMPER	X	O	MONO
12	JM243	3812-000219	WIRE	JUMPER	X	O	MONO
13	ICM501	1204-001422	IC	LA72634AM	O	X	HI FI
14	DM719	0401-000005	DIODE	1N4148	O	X	HI FI
15	CM501	2401-002009	C-ELEC	100uF,16V	O	X	HI FI
16	CM502	2401-000632	C-AXIAL	104	O	X	HI FI
17	CM503	2401-000455	C-ELEC	10uF,35V	O	X	HI FI
18	CM504	2401-000598	C-ELEC	1uF,50V	O	X	HI FI
19	CM505	2401-000922	C-ELEC	22uF,16V	O	X	HI FI
20	CM506	2401-001250	C-ELEC	4.7uF,35V	O	X	HI FI
21	CM507	2301-000383	C-AXIAL	103	O	X	HI FI
22	CM508	2401-000922	C-ELEC	22uF,16V	O	X	HI FI
23	CM509	2401-000914	C-ELEC	22uF,16V	O	X	HI FI
24	CM510	2401-000232	C-RADIAL	332,50V(P)	O	X	HI FI
25	CM511	2401-000445	NONE	472,50V(P)	O	X	HI FI
26	CM512	2401-000603	C-ELEC	1uF,50V	O	X	HI FI
27	CM513	2401-001537	C-ELEC	47uF,25V	O	X	HI FI
28	CM514	2202-000632	C-AXIAL	104	O	X	HI FI
29	CM515	2202-000863	C-AXIAL	561	O	X	HI FI
30	CM516	2401-000598	C-ELEC	1uF,50V	O	X	HI FI
31	CM517	2202-000797	C-AXIAL	103	O	X	HI FI
32	CM518	2401-000603	C-ELEC	1uF,50V	O	X	HI FI
33	CM519	2301-000232	C-RADIAL	332,50(P)	O	X	HI FI
34	CM520	2301-000445	C-RADIAL	472,50V(P)	O	X	HI FI
35	CM521	2401-000922	C-ELEC	22uF,16V	O	X	HI FI

NO	LOC. NO	CODE-NO	PARTS	SPEC	HI FI	MONO	REMARKS
36	CM522	2301-000383	C-RADIAL	103,50V(P)	O	X	HI FI
37	CM523	2401-001250	C-ELEC	4.7uF,35V	O	X	HI FI
38	CM524	2401-000922	C-ELEC	22uF,16V	O	X	HI FI
39	CM525	2401-000590	C-ELEC	1uF,50V	X	O	CHANGE
40	CM526	2202-000632	C-AXIAL	104	X	O	MONO
41	CM527	2401-001250	C-ELEC	4.7uF,35V	X	O	MONO
42	CM528	2401-001250	C-ELEC	4.7uF,35V	X	O	MONO
43	CM529	2202-000632	C-ELEC	104	X	O	MONO
44	CM530	2401-001513	C-AXIAL	47uF,16V(105)	X	O	MONO
45	DM501	0402-000132	C-ELEC	1N4004	X	O	MONO
46	JM117	3812-000219	WIRE	JUMPER	X	O	MONO
47	JM155	3812-000219	WIRE	JUMPER	X	O	MONO
48	JM166	3812-000219	WIRE	JUMPER	O	X	HI FI
49	JM172	3812-000219	WIRE	JUMPER	O	X	HI FI
50	JM186	3812-000219	WIRE	JUMPER	O	X	HI FI
51	JM195	3812-000219	WIRE	JUMPER	O	X	HI FI
52	JM240	3812-000219	WIRE	JUMPER	O	X	HI FI
53	JM241	3812-000219	WIRE	JUMPER	O	X	HI FI
54	JM021	3812-000219	WIRE	JUMPER	O	X	HI FI
55	JM013	3812-000219	WIRE	JUMPER	O	X	HI FI
56	JM120	3812-000219	WIRE	JUMPER	O	X	HI FI
57	JM145	3812-000219	WIRE	JUMPER	O	X	HI FI
58	JM152	3812-000219	WIRE	JUMPER	O	X	HI FI
59	JM167	3812-000219	WIRE	JUMPER	O	X	HI FI
60	JM197	3812-000219	WIRE	JUMPER	O	X	HI FI
61	LM501	2701-000002	COIL	100uH(AL04)	O	X	HI FI
62	LM502	2701-000002	COIL	100uH(AL04)	O	X	HI FI
63	LM503	2701-000002	COIL	100uH(AL04)	O	X	HI FI
64	RM501	2001-000472	R	2.7K	O	X	HI FI
65	RM502	2001-000577	R	2K	O	X	HI FI
66	RM503	2001-000995	R	820	O	X	HI FI
67	RM504	2001-000472	R	2.7K	O	X	HI FI
68	RM505	2001-000508	R	220K	O	X	HI FI
69	RM506	2001-000281	R	100	O	X	HI FI
70	RM507	2001-000281	R	100	O	X	HI FI
71	RM510	2001-000660	R	33K	O	X	HI FI
72	RM511	2001-000290	R	10K	O	X	HI FI
73	RM512	2001-000786	R	47K	O	X	HI FI
74	RM513	2001-000786	R	47K	O	X	HI FI

NO	LOC. NO	CODE-NO	PARTS	SPEC	HI FI	MONO	REMARKS
75	RM516	2001-000766	R	43K	O	X	HI FI
76	RM517	2001-000878	R	6.2K	O	X	HI FI
77	RM518	2001-000766	R	43K	O	X	HI FI
78	RM519	2001-000878	R	6.2K	O	X	HI FI
79	CNM103	AA39-20005B	R	3P	O	X	HI FI

5-5-5 SCORPIO PAL OPTION TABLE

NO	LOC. NO	CODE-NO	SPEC	HI FI	4HD	2H'D	2HD LP	REMARKS
1	DM712	0401-000005	1N4148	O	O	x	X	4HEAD
2	QM318	0504-000119	KSR1004	O	O	x	X	4HEAD
3	RM380	2001-001031	91K	O	O	x	X	4HEAD
4	DM715	0401-000005	1N4148	X	X	X	O	2HD LP
5	QM303	0504-000119	KSR1004	X	X	X	O	2HD LP
6	RM320	2001-000554	270	X	X	X	O	2HD LP
7	RM626	2001-000429	1K	X	X	X	O	2HD LP
8	DM714	0401-000005	1N4148	O	O	O	X	MESECAM

5-5-6 WITHOUT SECAM PART LIST

NO	LOC. NO	CODE-NO	PARTS	SPEC	WITH	WITH-OUT	REMARKS
1	JM116	3812-000219	WIRE	JUMPER	X	O	ADD
2	JM133	3812-000219	WIRE	JUMPER	O	X	SECAMI
3	RM652	2001-000429	R	1K	O	X	SECAM
4	RM692	2001-00429	R	1K	O	X	SECAM
5	CM901	2202-000127	C-AXIAL	103	O	X	SECAMI
6	CM902	2301-000224	C-RADIAL	223,50V(P)	O	X	SECAM
7	CM903	2201-000374	C-RADIAL	221,50V,NPO	O	X	SECAM
8	CM904	2201-000193	C-RADIAL	100,50V	O	X	SECAM
9	CM905	2201-000645	C-RADIAL	681,50V	O	X	SECAM
10	CM906	2301-000383	C-RADIAL	103	O	X	SECAM
11	CM907	2201-000681	C-RADIAL	820,50V	O	X	SECAM
12	CM908	2401-000480	C-ELEC	10uF,50V	O	X	SECAM
13	CM909	2202-000796	C-AXIAL	102	O	X	SECAM
14	CM910	2301-001333	C-ELEC	0.47uF,50V	O	X	SECAM
15	CM911	2201-000796	C-AXIAL	510	O	X	SECAM
16	CM912	2201-000127	C-AXIAL	103	O	X	SECAM
17	CM913	2201-000632	C-AXIAL	104	O	X	SECAM
18	CM914	2201-000234	C-RADIAL	151,50V	O	X	SECAM
19	CM915	2301-000383	C-RADIAL	103,50V(P)	O	X	SECAM
20	CM916	2401-002691	C-ELEC	47uF,25V	O	X	SECAM
21	CM917	2202-000632	C-AXIAL	104	O	X	SECAM
22	CM918	2301-000383	C-RADIAL	103,50V(P)	O	X	SECAM
23	CM919	2301-000383	C-RADIAL	103,50V(P)	O	X	SECAM
24	CM920	2401-000660	C-ELEC	2.2uF,50V	O	X	SECAM
25	CM921	2201-000262	C-RADIAL	181,50V	O	X	SECAM
26	CM922	2401-000603	C-ELEC	1uF,50V	O	X	SECAM
27	CM924	2202-000632	C-AXIAL	104	O	X	SECAM
28	CM925	2202-000632	C-AXIAL	104	O	X	SECAM
29	CM926	2202-000127	C-AXIAL	103	O	X	SECAM
30	DM713	0401-000005	DIODE	1N4148	O	X	SECAM
31	DM902	0401-000005	DIODE	1N4148	O	X	SECAM
32	ICM901	1204-001437	IC	LA7359	O	X	SECAM
33	JM126	3812-000219	WIRE	JUMPER	O	X	SECAM
34	JM170	3812-000219	WIRE	JUMPER	O	X	SECAM
35	JM185	3812-000219	WIRE	JUMPER	O	X	SECAMI
36	JM196	3812-000219	WIRE	JUMPER	O	X	SECAM
37	LM901	2701-000002	COIL	100uH, (AL04)	O	X	SECAM
38	LM902	2701-000163	COIL	27uH, (AL03)	O	X	SECAM
39	LM903	2701-000158	COIL	22uH, (AL02)	O	X	SECAM
40	LM904	2701-000191	COIL	47uH, (AL02)	O	X	SECAM
41	LM905	2701-000208	COIL	6.8uH, (AL02)	O	X	SECAM
42	QM901	0501-000398	COIL	KSC945-Y	O	X	SECAM

NO	LOC. NO	CODE-NO	PARTS	SPEC	WITH	WITH-OUT	REMARKS
43	QM902	0504-000142	WIRE	KSR2001	O	X	SECAM
44	QM904	0501-000398	C-AXIAL	KSC945	O	X	SECAM
45	QM905	0501-000398	C-RADIAL	KSC945	O	X	SECAM
46	QM906	0501-000303	C-RADIAL	KSA733	O	X	SECAM
47	RM376	2001-000258	C-RADIAL	1.8K	O	X	SECAM
48	RM901	2001-000522	C-RADIAL	22K	O	X	SECAM
49	RM902	2001-000472	C-RADIAL	2.7K	O	X	SECAM
50	RM903	2001-000539	C-RADIAL	24K	O	X	SECAM
51	RM904	2001-000947	C-ELEC	7.5K	O	X	SECAM
52	RM905	2001-000890	C-AXIAL	6.8K	O	X	SECAM
53	RM906	2001-000837	C-ELEC	51K	O	X	SECAM
54	RM907	2001-000723	C-AXIAL	4.3K	O	X	SECAM
55	RM908	2001-000633	C-AXIAL	30K	O	X	SECAM
56	RM909	2001-000890	C-AXIAL	6.8K	O	X	SECAM
57	RM910	2001-000429	C-RADIAL	1K	O	X	SECAM
58	RM912	2001-000674	C-RADIAL	360	O	X	SECAM
59	RM913	2001-000281	C-ELEC	100	O	X	SECAM
60	RM914	2001-000786	C-AXIAL	47K	O	X	SECAM
61	RM915	2001-000539	C-RADIAL	24K	O	X	SECAM
62	RM916	2001-001015	C-RADIAL	9.1K	O	X	SECAM
63	RM917	2001-000977	C-ELEC	8.2K	O	X	SECAM
64	RM918	2001-000356	C-RADIAL	150K	O	X	SECAM
65	RM919	2001-000734	C-ELEC	4.7K	O	X	SECAM
66	RM920	2001-000539	C-AXIAL	24K	O	X	SECAM
67	RM921	2001-000429	C-AXIAL	1K	O	X	SECAM
68	RM922	2001-000319	C-AXIAL	120K	O	X	SECAM

5-5-7 USELESS TABLE

NO	LOC. NO	CODE-NO	PARTS	SPEC	WITH	WITH-OUT	REMARKS
1	CM330						
2	CM369						
3	CM385						
4	CM388						
5	CM607						
6	CM608						
7	CM646						
8	DM716						
9	DM717						
10	ICM604						
11	LM311						
12	RM326						
13	RM337						
14	RM374						
15	RM375						
16	RM379						
17	RM608						
18	RM617						
19	RM692						
20	RM695						
21	XTM302						
22	XTM602						

MEMO

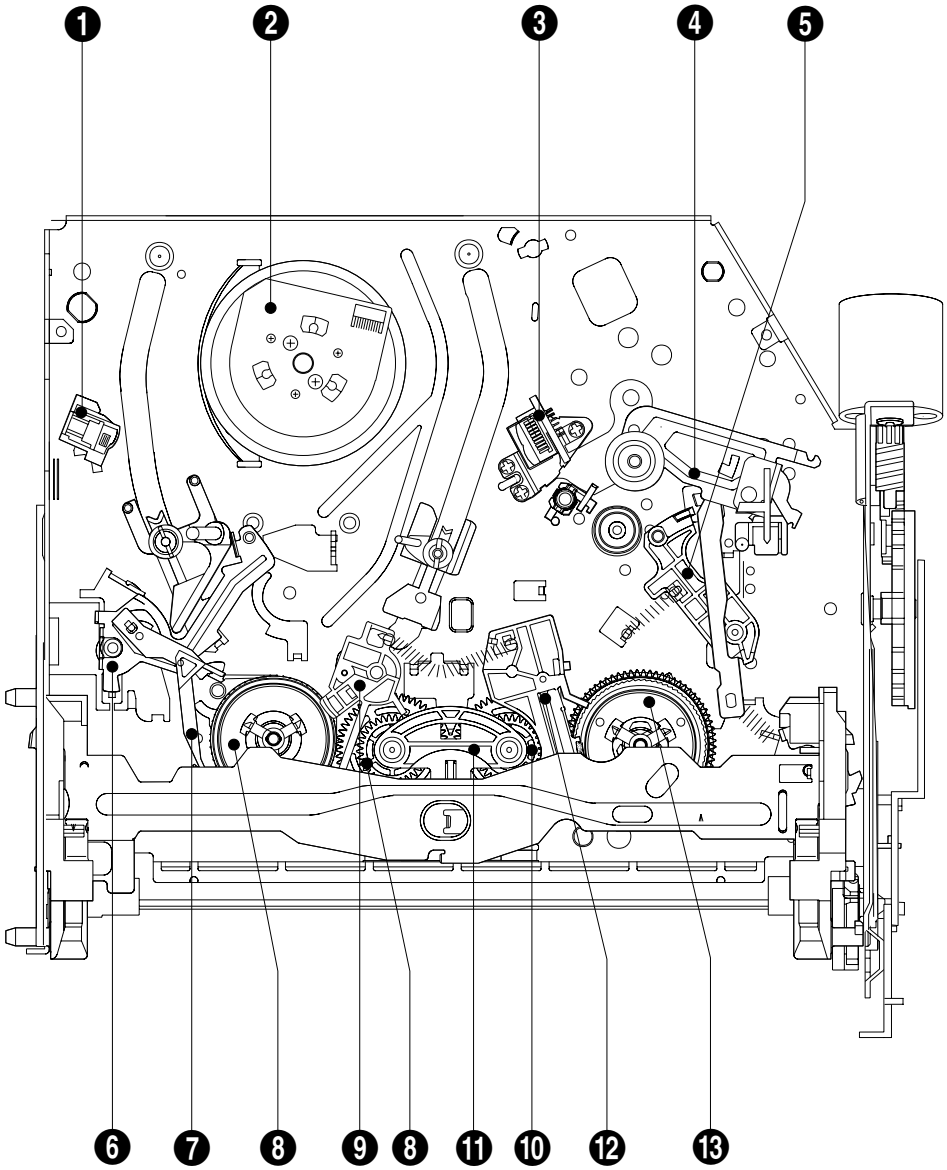


Fig. 4-2 Top Parts Location-2

1. FE HEAD
2. CYLINDER ASS'Y
3. ACE HEAD ASS'Y
4. LEVER UNIT PINCH ASS'Y
5. LEVER #9 GUIDE ASS'Y
6. LEVER TENSION ASS'Y
7. BAND BRAKE ASS'Y
8. DISK S REEL
9. LEVER S BRAKE ASS'Y
10. GEAR IDLE
11. LEVER IDLE
12. LEVER T BRAKE ASS'Y
13. DISK T REEL

4-1-2 Bottom View

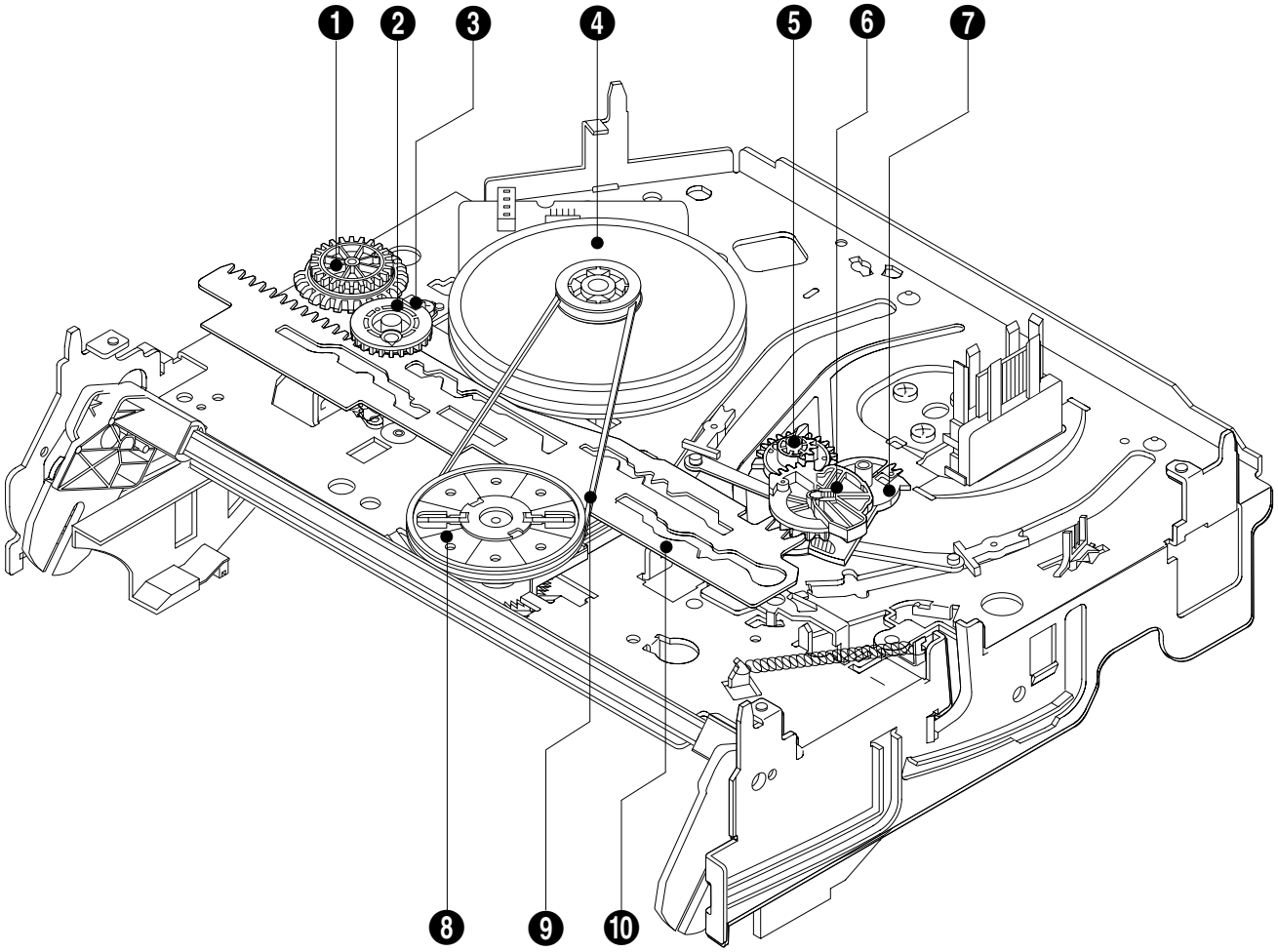


Fig. 4-3 Bottom Parts Location

1. GEAR JOINT 1
2. GEAR JOINT 2
3. BRACKET GEAR
4. MOTOR CAPSTAN ASS'Y
5. LEVER T LOAD ASS'Y
6. GEAR LOADING DRIVE
7. LEVER S LOAD ASS'Y
8. HOLDER CLUTCH ASS'Y
9. BELT PULLEY
10. SLIDER CAM

4-2 Main Deck

4-2-1 Lever FL Door Removal

1) Push the Holder FL Cassette Ass'y ❶ about 20mm in the direction of arrow “A”.
2) Rotate the Lever FL Door ❷ in the direction of arrow “B”.
3) Release the Hook ❸ and Remove the Lever FL Door ❷ in the direction of arrow “C”.

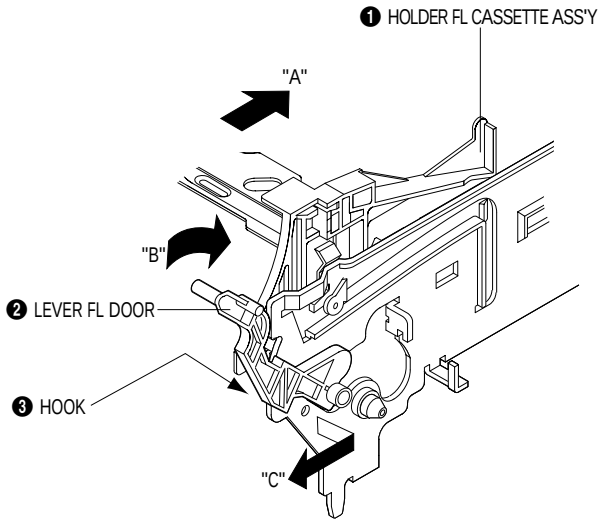


Fig. 4-4 Lever FL Door Removal

4-2-2 Holder FL Cassette Ass’y Removal

1) Pull the Holder FL Cassette Ass'y ❶ to the eject position.
2) Pull the Holder FL Cassette Ass'y ❶ as grasping the Holder FL Cassette Ass'y ❶ and Lever FL Cassette-R ❷ in the same time to release hooking from Main Base until the Boss [A] of Holder FL Cassette Ass'y ❶ is taken out from the Rail [B].
3) Lift the Holder FL Cassette Ass'y ❶, in this time, you have to grasp the Lever FL Cassette-R ❷ Continuously until the Holder FL Cassette Ass'y ❶ is taken out completely.

Note : Be sure to insert Lever FL Cassette-R ❷ in the direction of “A” to prevent separation and breakage of the Lever FL Cassette-R ❷ at disassembling and reassembling.

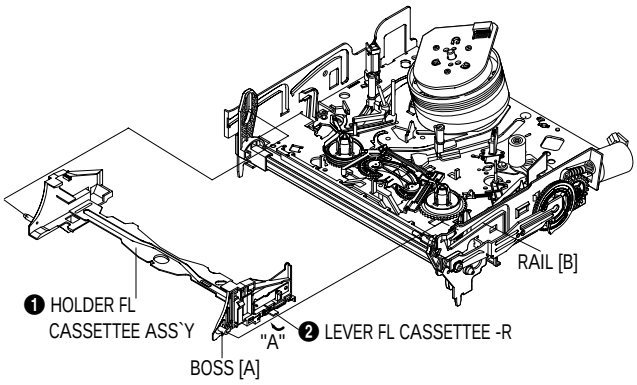


Fig. 4-5 Holder FL Cassette Ass’y Removal

4-2-3 Slider FL Drive, Gear FL Cam Removal

1) Pull the Slider FL Drive ❶ to the front direction.
2) Remove the Slider FL Drive ❶ in the direction of arrow. (Refer to Fig. 1-6)
3) Remove the Gear FL cam ❷.

Note : When reinstalling be sure to reassemble Slider FL drive ❶ after you insert the Boss of Lever FL ARM-R in Groove of Slider Fl drive ❶.

Assembly : Align the Gear FL Cam ❶ with the Gear worm wheel Post as shown drawing.
(Refer to Timing point)

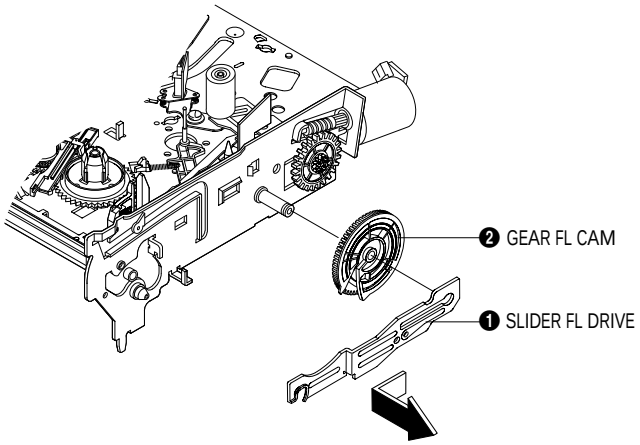


Fig. 4-6 Slider FL Drive Removal

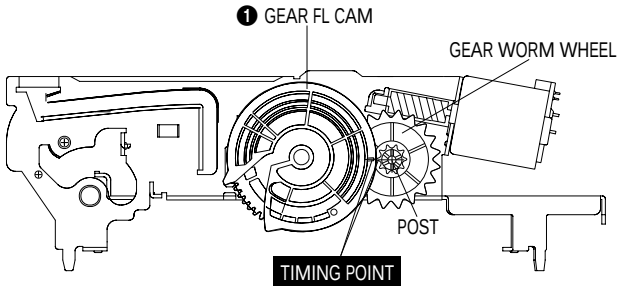


Fig. 1-7 Gear FL Cam, Gear Worm

4-2-4 Lever FL Arm Ass'y Removal

1) Push the hole "A" in the direction of arrow "B" use the pin.(about Dia. 2.5)
2) Pull out the Lever FL Arm Ass'y ❶ from the Boss of Main Base.
3) Remove the Lever FL Arm Ass'y ❶ in the direction of arrow "C".

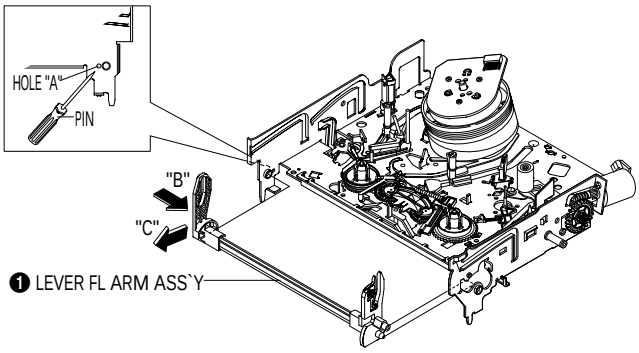


Fig. 4-8 Lever FL Arm Ass'y Removal

4-2-5 Gear Worm Wheel Removal

1) Remove the Gear Worm wheel ❶.

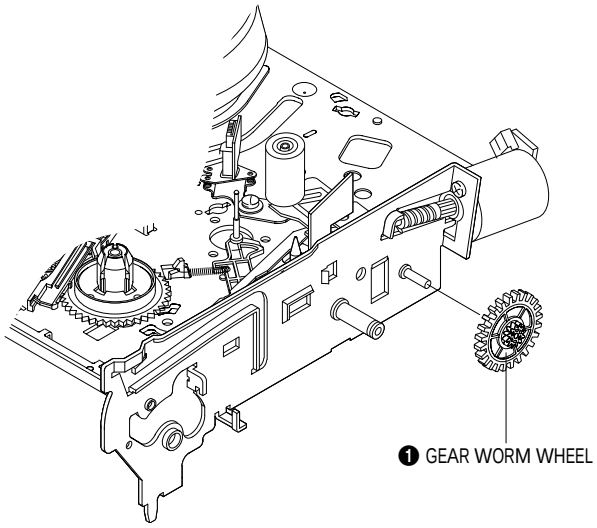


Fig. 4-9 Gear Worm Wheel Removal

4-2-6 Motor Loading Ass'y Removal

1) Remove the screw ❶.
2) Remove the Motor Loading Ass'y ❷.

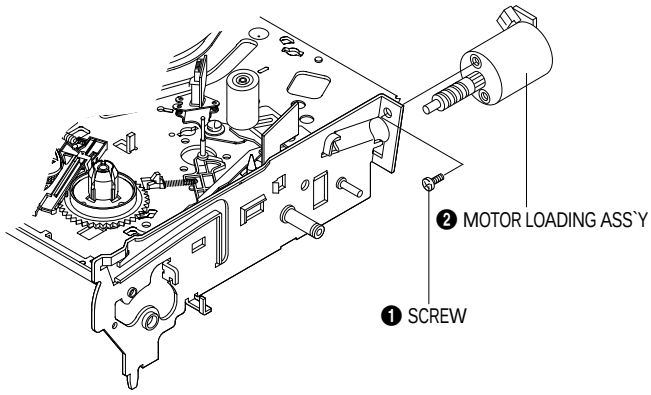


Fig. 4-10 Motor Loading Ass'y Removal

4-2-7 Bracket Gear, Gear Joint 2, 1 Removal

1) Remove the SCREW ❶.
2) Remove the Bracket Gear ❷.
3) Remove the Gear Joint 2 ❸.
4) Remove the Gear Joint 1 ❹.

Assembly :

1) Be sure to align dot mark of Gear Joint 1 ❶ with dot mark of Gear Joint 2 ❷ as shown Fig 4-12. (Refer to Timing point1)
2) Confirm the Timing Point 2 of the Gear Joint 2 ❷ and Slider Cam ❸.

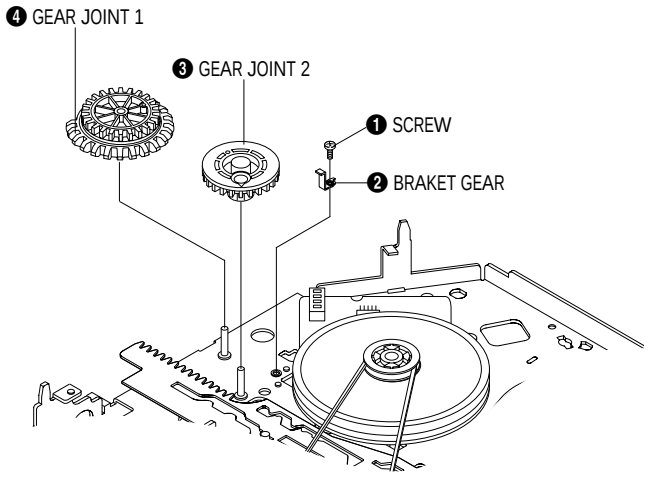


Fig. 4-11 Bracket Gear, Gear Joint 1,2 Removal

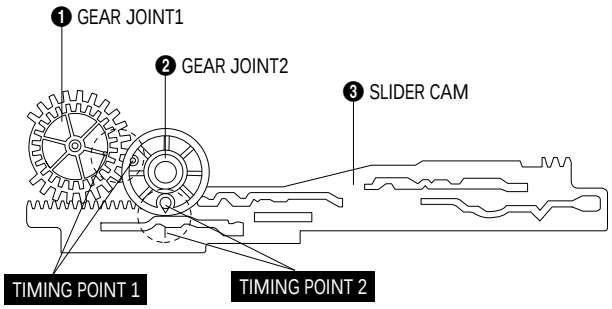


Fig. 4-12 Gear Joint 1,2 Assembly

4-2-8 Gear Loading Drive, Slider Cam, Lever Load S, T Ass'y Removal

1) Remove the Belt Pulley. (Refer to Fig. 4-30)
2) Remove the Gear Loading Drive ❶ after releasing Hook [A] in the direction arrow as shown in detail drawing.
3) Remove the Slider Cam ❷.
4) Remove the Lever Load ❸, Link Load ❺ & Lever Load ❹, Link Load ❻.

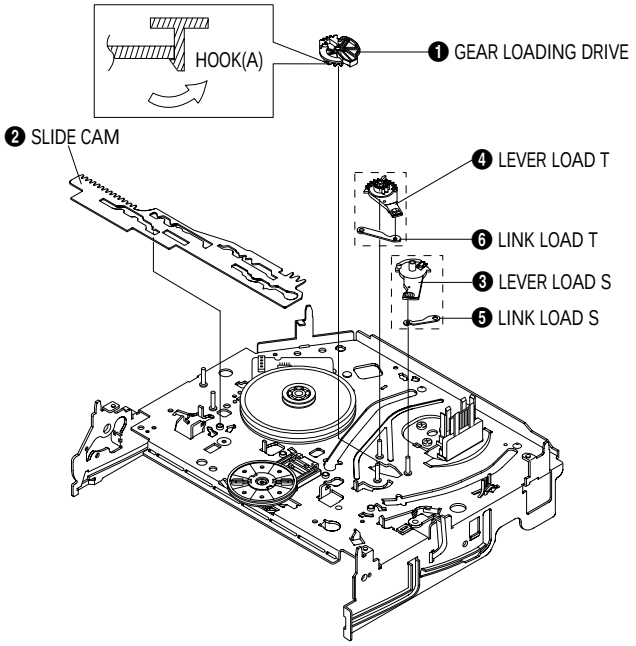


Fig. 4-13 Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y Removal

4-2-9 Gear Loading Drive, Slider Cam, Lever Load S, T Ass'y Assembly

1) When reinstalling, be sure to align dot of Lever Load T Ass'y ❶ with dot of Lever Load S Ass'y ❷ as shown in drawing, (Refer to Timing Point 1).
2) Insert the Pin A,B,C,D into the Slider Cam ❸ hole,
3) Be sure to align dot of Lever Load T ❶ and dot of Gear Loading Drive ❹, (Refer to Timing Point 2).
4) Aline dot of Gear Loading drive ❹ with mark of Slider Cam ❸ as shown in drawing(Refer to Timing Point 3).

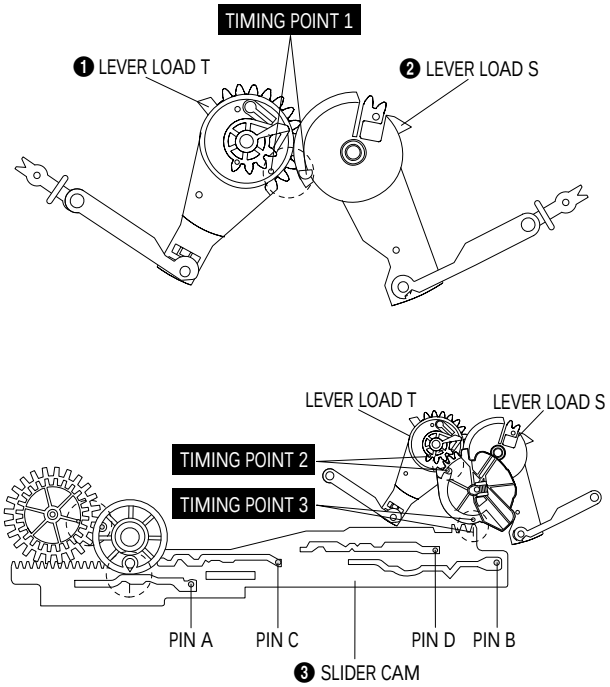


Fig. 4-14 Gear Loading Drive, Slider Cam, Lever Load S, T Ass'y Assembly

4-2-10 Lever Pinch Drive, Lever Tension Drive Removal

1) Remove the Lever Pinch Drive ❶, Lever Tension Drive ❷.

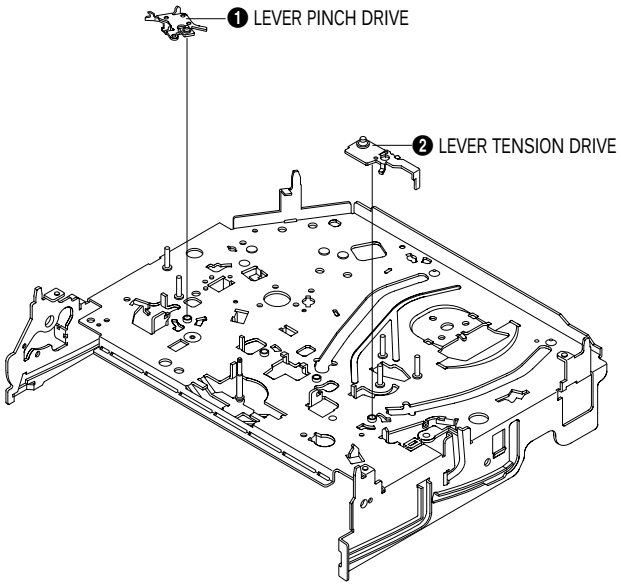


Fig. 4-15 Lever Pinch Drive, Lever Tension Drive Removal

4-2-11 Lever Tension Ass'y, Band Brake Ass'y Removal

1) Remove the Lever Brake S Ass'y (Refer to Fig 4-17).
2) Remove the Spring Tension Lever ❶.
3) Rotate stopper of Main Base in the direction of arrow "A".
4) Lift the Lever Tension Ass'y ❷ & Band brake Ass'y ❸.

Note :
1) When replacing the Lever Tension Ass'y ❷, be sure to apply Grease on the post,
2) Take care not to touch stain on the felt side, and not to be folder and broken Band brake Ass'y
3) After Lever Tension Ass'y seated, Rotate stopper of Main Base to the Mark[B].

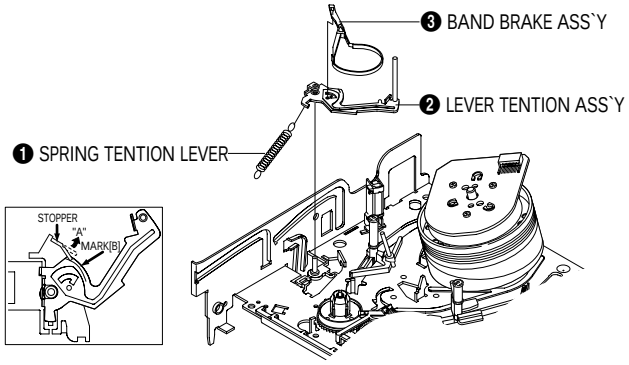


Fig. 4-16 Lever Tension Ass'y, Band Brake Ass'y Removal

4-2-12 Lever Brake S, T Ass'y Removal

1) Release the Hook [A] and the Hook [B], [C] in the direction of arrow as shown in Fig 4-17.
2) Lift the Lever S, T Brake Ass'y ❶, ❷ with spring brake ❸.

Assembly :
1)Assembly the Lever S Brake Ass'y ❶ on the Main Base.
2)Assembly the Lever T Brake Ass'y ❷ with spring brake ❸.

Note : Take extreme care not to be folded and transformed Spring Brake at removing or reinstalling.

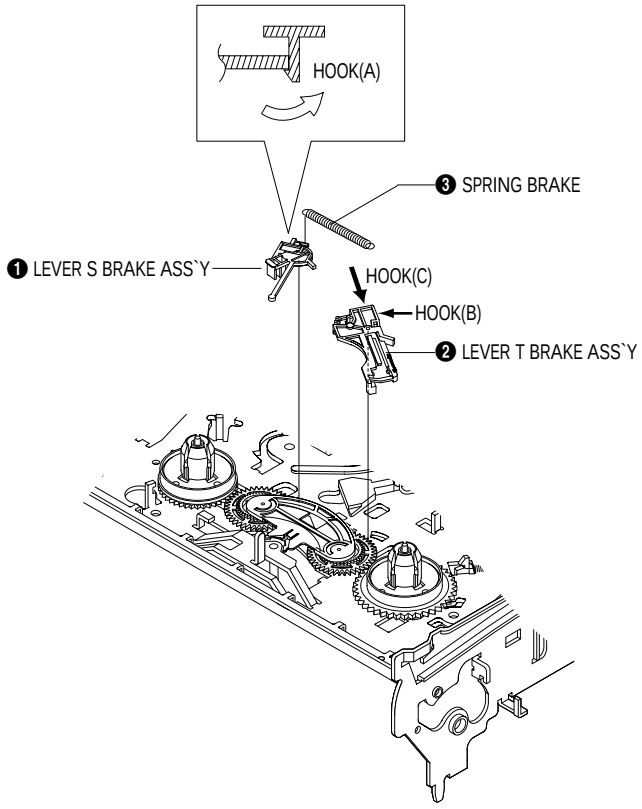


Fig. 4-17 Lever Brake S, T Ass'y Removal

4-2-13 Gear Idle Ass'y Removal

1) Push the Lever Idle ❶ in the direction of arrow "A", "B".
2) Lift the Lever Idle ❶.

Assembly :
1) Apply oil in two Bosses of Lever Idle ❶.
2) Assemble the Gear Idle ❷ with the Lever Idle ❶.

Note : When replacing the Gear Idle ❷, be sure to add oil in the boss of Lever Idle ❶.

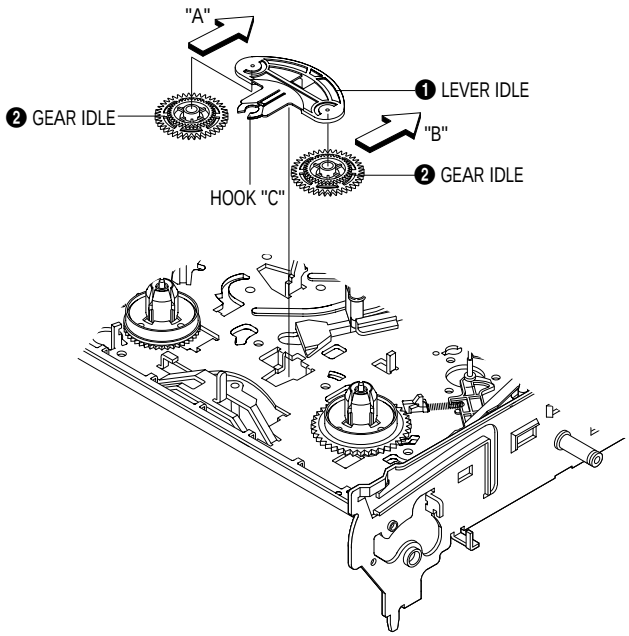


Fig. 4-18 Gear Idle Ass'y Removal

4-2-14 Disk S, T Reel Removal

1) Lift the Disk S, T Reel ❶, ❷.

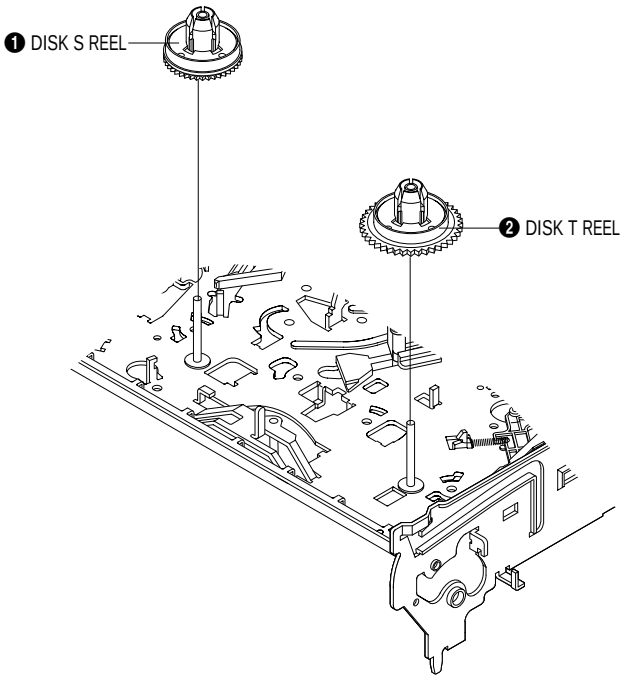


Fig. 4-19 Disk S, T Reel Removal

4-2-15 Holder Clutch Ass'y Removal

1) Remove the Washer Slit ❶.
2) Lift the Holder Clutch Ass'y ❷.

Note : When you reinstall Holder Clutch Ass'y
1) Check the condition of spring as shown in detail A.
2) Don't push Holder Clutch Ass'y down with excessive force Just insert Holder Clutch Ass'y into post center with dead force and Rotate it smoothly.
Be sure to confirm that spring is in the slit of Gear Center Ass'y as shown in detail B.

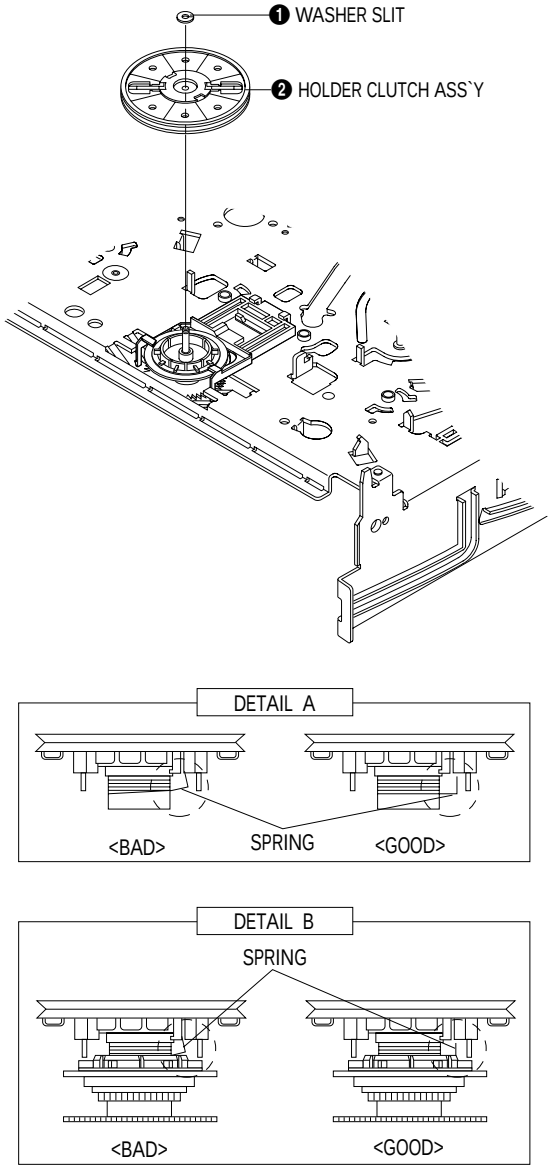


Fig. 4-20 Holder Clutch Ass'y Removal

4-2-16 Lever Up Down Ass'y, Gear Center Ass'y Removal

1) Remove the 2 hooks in the direction of arrow as shown Fig. 4-21 and lift the Lever Up Down Ass'y ❶.
2) Lift the Gear Center Ass'y ❷.

Assembly :
1) Insert the Lever Up Down Ass'y ❶ in the rectangular holes on Main Base as shown in Fig 4-22.
2) Lift the Lever Up Down Ass'y ❶ about 35°. (Refer to Fig 4-22)
3) Insert Ring of the Gear Center Ass'y ❷ in the Guide of the Lever Up Down Ass'y ❶.
4) Insert the Gear Center Ass'y ❷ in the post on Main Base.
5) Push down the Lever Up Down Ass'y ❶ for locking of the Hook.

Note :
1) Take care not to separate and sentence does not mark sense.
2) Be sure to confirm that Ring of the Gear Center Ass'y ❷ is in the Guide of the Lever Up Down Ass'y ❶ after finishing assembly of Lever Up Down Ass'y ❶ and Gear Center Ass'y ❷.

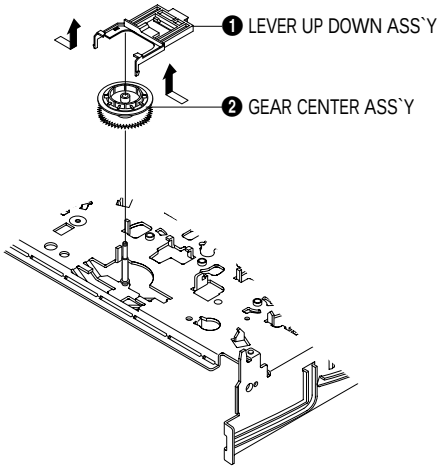


Fig. 4-21 Lever Up Down Ass'y Removal

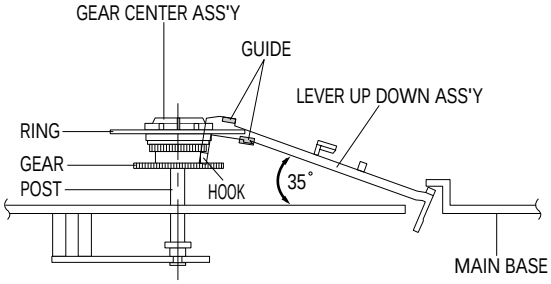


Fig. 4-22 Lever Up Down Ass'y Removal

4-2-17 Guide Cassette Door Removal

1) Lift the Hook [A].
2) Rotate the Guide Cassette Door ❶ in the direction of arrow.

Note : After reinstalling the Guide Cassette Door ❶ sure the Hook [A].

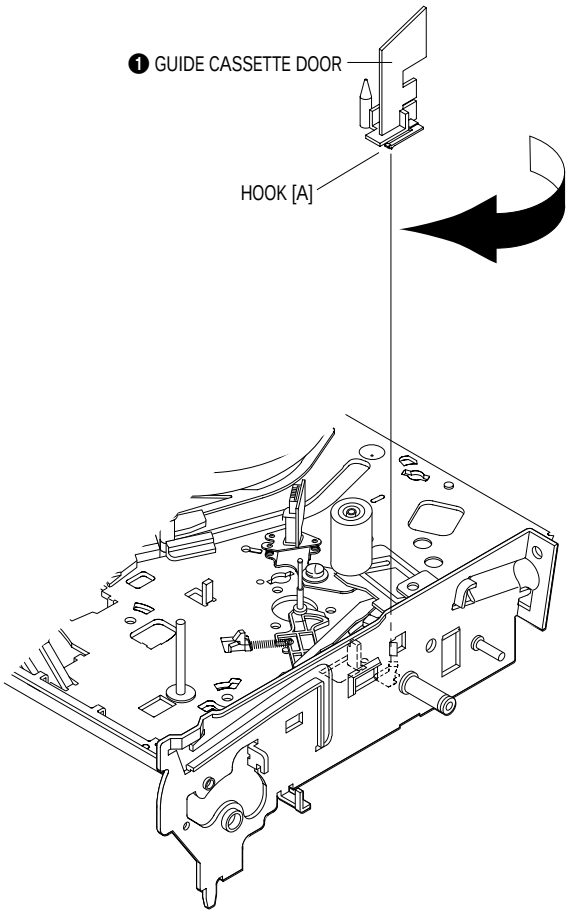


Fig. 4-23 Guide Cassette Door Removal

4-2-18 Lever Unit Pinch Ass'y, Plate Joint, Spring Pinch Drive Removal

1) Lift the Unit Pinch Ass'y ❶.
2) Remove the Plate Joint ❷ from Lever Pinch Drive.
3) Remove the Spring Pinch Drive ❸.

Note :
1) Take extreme care not to touch the grease on the Roller Pinch.
2) When reinstalling, be sure to apply grease on the post pinch roller.

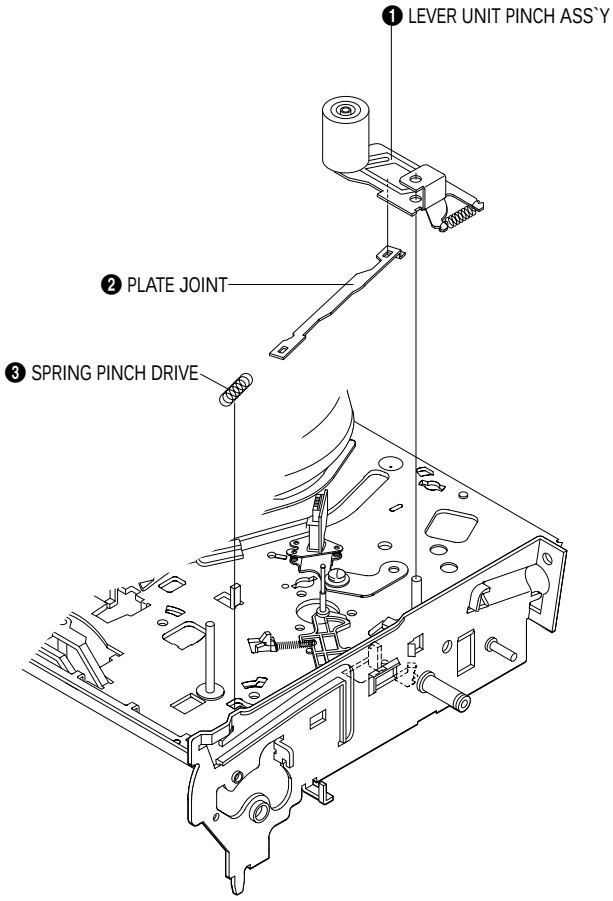


Fig. 4-24 Lever Unit Pinch Ass'y, Plate Joint, Spring Pinch Drive Removal

4-2-19 Lever #9 Guide Ass'y Removal

1) Remove the Spring #9 Guide ❶.
2) Lift the Spring #9 Guide Ass'y ❷ in the direction of arrow "A".

Note :
1) Take extreme care not to get grease on the tape Guide Post.
2) After reinstalling, check the bottom side of the Post #9 Guide to the top side of Main Base.

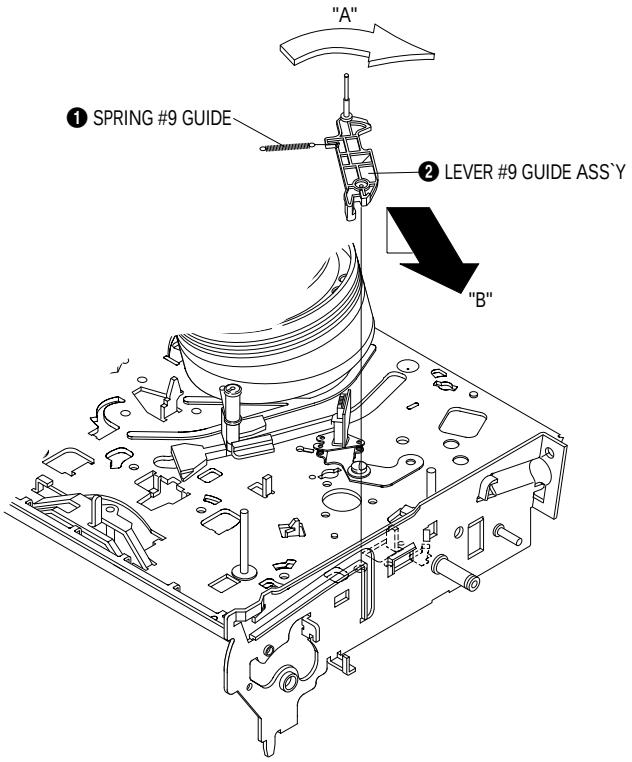


Fig. 4-25 Lever #9 Guide Ass'y Removal

4-2-20 FE Head Removal

1) Remove the screw ❶.
2) Lift the FE Head ❷.

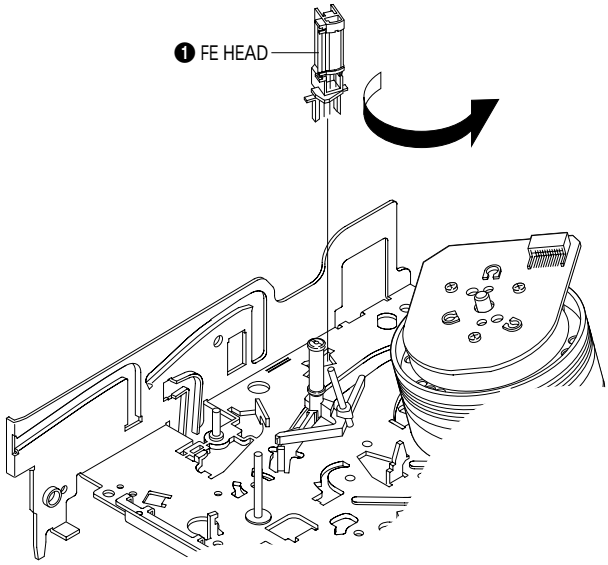


Fig. 4-26 FE Head Removal

4-2-21 ACE Head Removal

1) Pull out the FPC from connector of ACE Head Ass'y ❷.
2) Remove the screw ❶.
3) Lift the ACE Head Ass'y ❷.

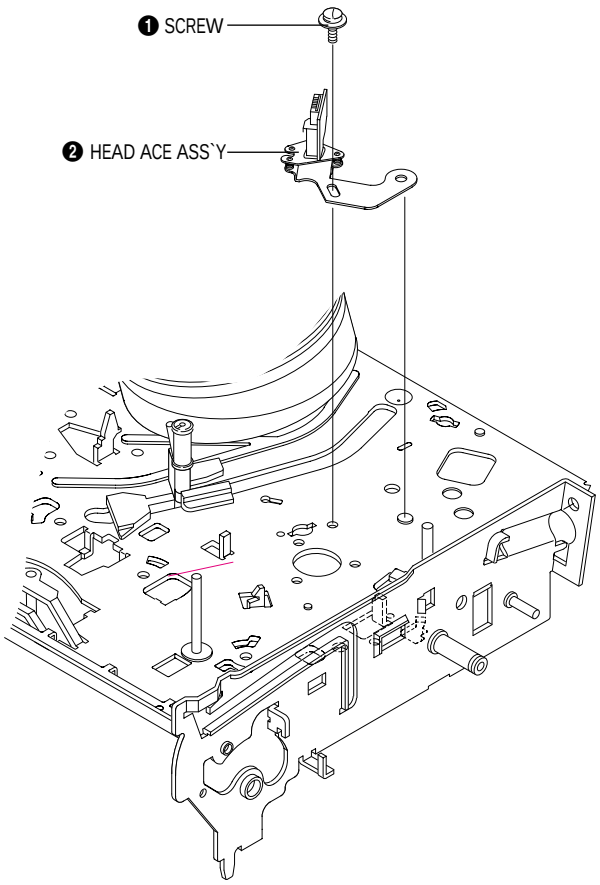


Fig. 4-27 ACE Head Removal

4-2-22 Slider S, T Ass'y Removal

1) Move the Slider S, T Ass'y ❶, ❷ to slot, and then lift it to remove. (Refer to arrow)

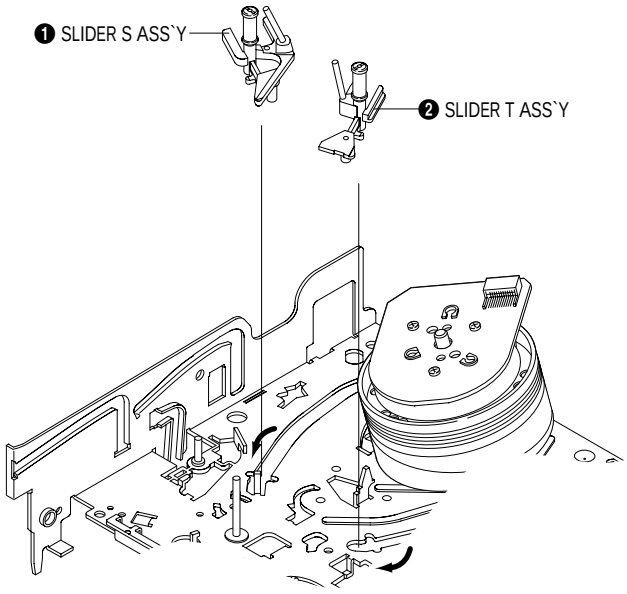


Fig. 4-28 Slider S, T Ass'y Removal

4-2-23 Plate Ground Deck, Cylinder Ass'y Removal

1) Remove the 3 Screws ❶.
2) Lift the Plate Ground Deck ❷.
3) Lift the Cylinder Ass'y ❸.

Assembly :
1) Match the 3 holes in the bottom of Cylinder ass'y ❸ to the 3 holes of Main Base as attending not to drop or knock the Cylinder ass'y ❸.
2) Tighten the 1 Screw ❶.
3) Match the Plate Ground Deck ❷ to the Hole of Base Main.
4) Tighten the other 2 Screws ❶.

Note :
1) Take care not to touch the Cylinder Ass'y ❸ and the tape guide post at reinstalling.
2) When reinstalling, Don't push down too much on Screw Driver.

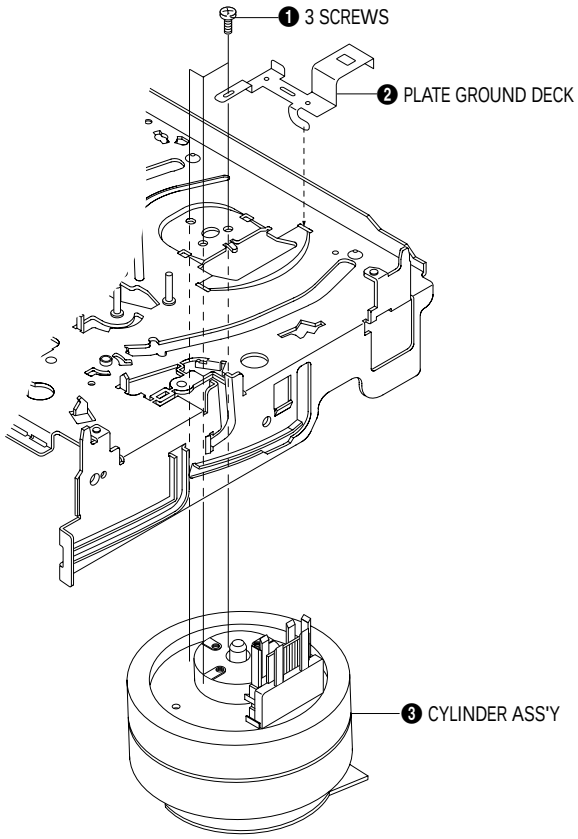


Fig. 4-29 Plate Ground Deck, Cylinder Ass'y Removal

4-2-24 Belt Pulley Removal

1) Remove the Belt Pulley ❶.

Note : Take extreme care not to get grease on Belt Pulley ❶ at assembling or reassembling.

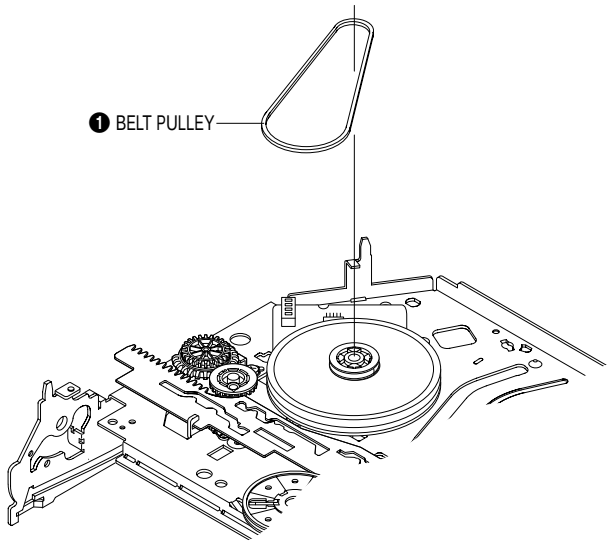


Fig. 4-30 Belt Pulley Removal

1-2-25 Level Head Cleaner Ass'y Removal (Optional)

1) Release the Hook ❶.
2) Lift the Lever Head Cleaner Ass'y ❷.

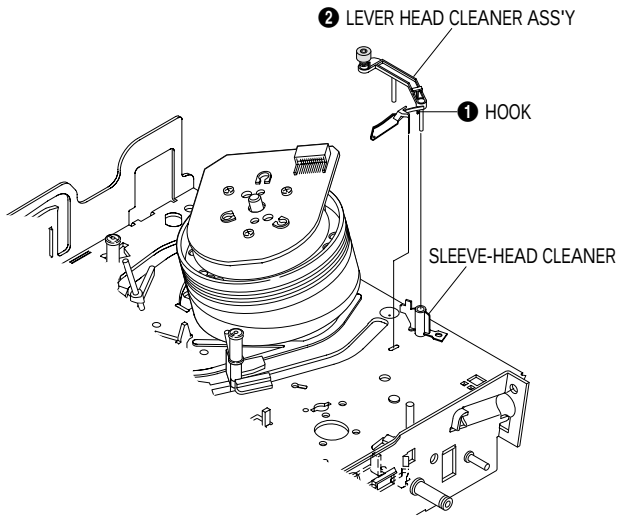


Fig. 4-31 Level Head Cleaner Ass'y Removal

4-2-26 Damper Capstan, Motor Capstan Ass'y Removal

1) Remove the Damper Capstan ❶ in the direction of arrow.
2) Remove the 3 Screws ❷.
3) Remove the Motor Capstan Ass'y ❸.

Assembly :
1) Match the 3 holes of Motor Capstan Ass'y ❸ to the 3 holes of Main Base. Be careful not to drop or knock the Motor Capstan Ass'y ❸.
2) Tighten the 3 Screws ❷ in the direction of arrow as shown detail drawing.
3) Assemble the Damper Capstan ❶.

Note : After tightening screws, check if there is gap between the head of screws and the top side of Main Base. There should have no gap between the head of screws and the top side of Main Base.
After reinstalling, adjusting the tape transport system again.

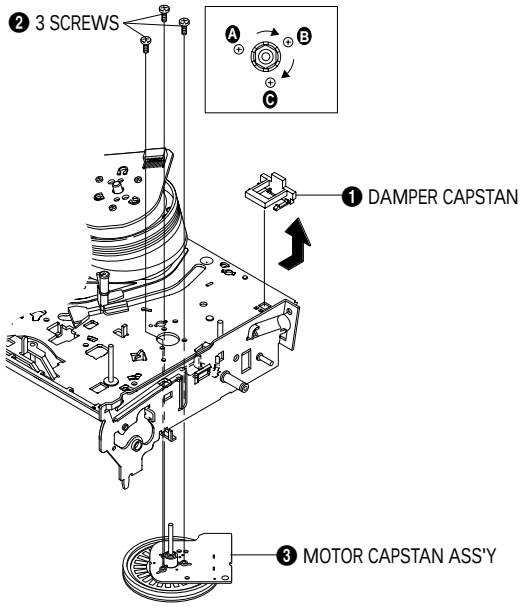


Fig. 4-32 Damper Capstan,Motor Capstan Ass'y Removal

4-2-27 How to Eject the Cassette Tape (If the unit does not operate on condition that is inserted into housing ass'y)

1) Turn the Gear worm ❶ clockwise with screw driver.(Refer to arrow)
(Other method : Remove the Screw of Motor Load Ass'y, Separate the Motor Load Ass'y)

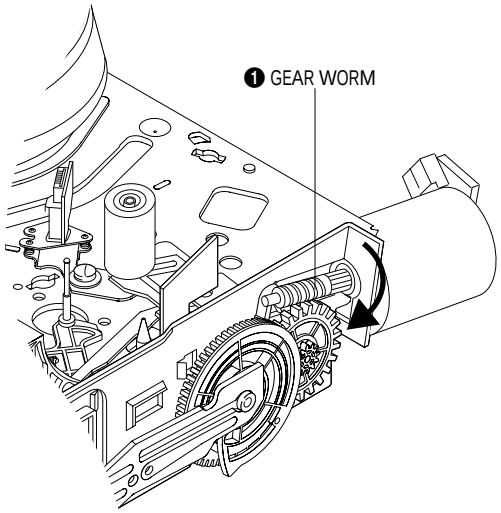


Fig. 4-33

2) When Slider S,T are approched in the position of unloading, rotate holder Clutch counterclockwise after inserting screw driver in the hole of frame's bottom in order to wind the unwinded tape. (Refer to Fig.4-34)
(If you rotate Gear Worm ❶ continuously when tape is in state of unwinding, you may cause a tape contamination by grease and tape damage. Be sure to wind the unwinded tape in the state of set horizontly.)
3) Rotate Gear Worm ❶ clockwise using screw driver again up to the state of eject mode and then pick out the tape.(Refer to Fig.4-33)

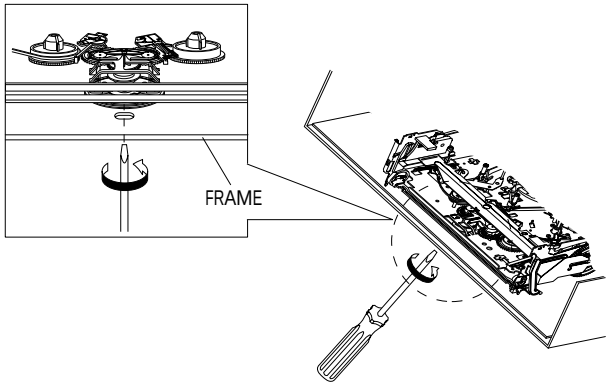


Fig. 4-33

4-3 The table of clearing, Lubrication and replacement time about principal parts

1) The replacement time of parts is not life of parts.
2) The table 1-1 is that the VCR Set is in normal condition (normal temperature, normal humidity).
   The checking period may be changed owing to the condition of use, runtime and environmental conditions.
3) Life of the Cylinder Ass'y is depend on the condition of use.
4) See exploded view for location of each parts.

<Table 1-1>

*	Parts Name	Checking Period										Remark
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
TAPE PATH SYSTEM	POST TENSION	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	- To clean the parts, use patch and alcohol (solvent). - After cleaning, use the video tape after alcohol is gone away completely. - We recommend to use oil [EP-50] or solvent. - One or two drops of oil should be applied after cleaning with alcohol.
	SLANT POST S, T	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#8 GUIDE SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	CAPSTAN SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#9 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#3 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	GUIDE ROLLER S, T	Δ	Δ	Δ	O	O	O	O	O	O	O	
	CYLINDER ASS'Y	Δ	O	O	O	O	O	O	O	O	O	
	FE HEAD	Δ	Δ	Δ	O	O	O	O	O	O	O	
	ACE HEAD	Δ	O	O	O	O	O	O	O	O	O	
	PINCH ROLLER	Δ	O	O	O	O	O	O	O	O	O	
	POST REEL S, T											- Periodic time of applying oil (Apply oil after cleaning) - The excessive applying oil may be the cause of malfunction.
	SLEEVE TENSION											
	POST CENTER											
	LEVER IDLE BOSS (2Point)											
DRIVING SYSTEM	CAPSTAN MOTOR PULLEY	Δ	Δ	Δ	Δ	Δ	O	O	O	O	O	
	BELT PULLEY				O	O	O	O	O	O	O	
	HOLDER CLUTCH ASS'Y	Δ	O	O	O	O	O	O	O	O	O	
	GEAR CENTER ASS'Y		O	O	O	O	O	O	O	O	O	
	GEAR IDLE (2Point)		O	O	O	O	O	O	O	O	O	
	LOADING MOTOR		O	O	O	O	O	O	O	O	O	
BRAKE SYSTEM	BAND BRAKE ASS'Y		O	O	O	O	O	O	O	O	O	
	BRAKE T ASS'Y		O	O	O	O	O	O	O	O	O	

Δ : Cleaning O : Check and replacement in necessary : Add Oil

4-4 Tape Transport System and Adjustment Locations

The tape transport system has been adjusted precisely in the factory. Alignment is not necessary except for the following :
1) Noise observed on the screen.
2) Tape damage.
3) Parts replacement in the tape transport system.

Lower flange height of tape guide is used as the reference for the transport adjustment.
To maintain the height of the tape guide and prevent damage, do not apply excessive force onto the main base.

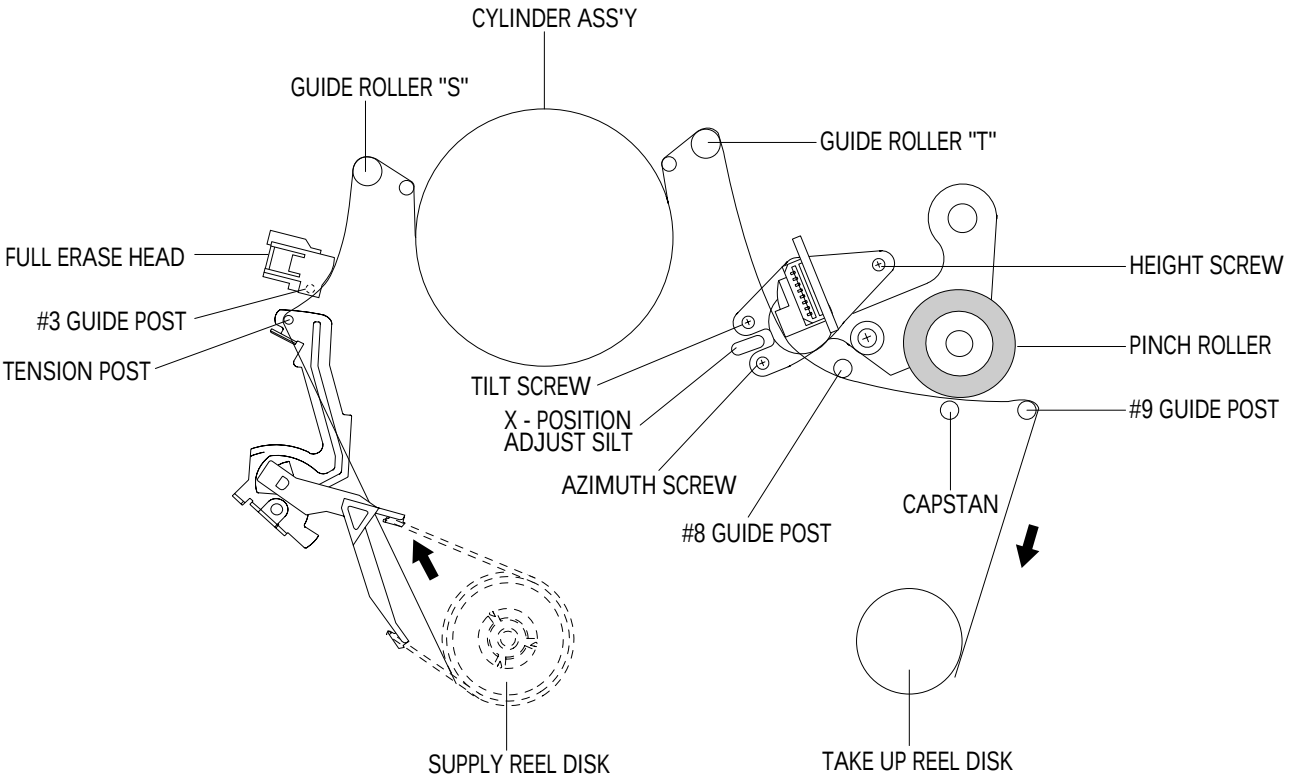


Fig. 4-4-1 Location of Tape Transport Adjustment

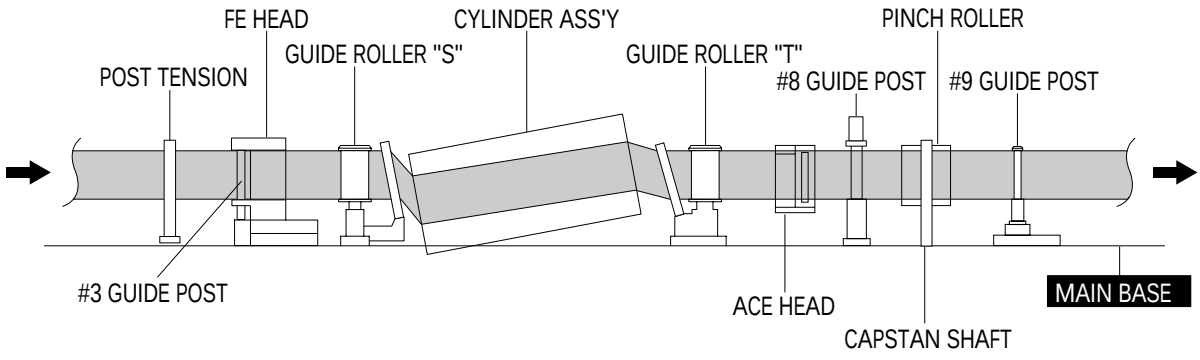


Fig. 4-4-2 Tape Travel Diagram

4-5 Tape Transport System Adjustment

When parts are replaced, perform the required adjustments by referring to procedures for the tape transport system. If there are any changes to the tape path, first run a T-120 tape and make sure excessive tape wrinkle does not occur at the tape guides.

1) If tape wrinkle is observed at the guide roller S, T, turn the guide roller S, T until wrinkle disappears.
2) If the tape wrinkle is still observed at the tape guide, perform the tilt adjustment of the ACE head. (See "2. Alignment and Adjustment" of the Service Manual for Test Point Locations.)

4-5-1 ACE Head Assembly Adjustment

4-5-1(a) ACE HEAD HEIGHT ADJUSTMENT

1) Run the alignment tape (Color bar) in the playback mode.
2) Observe surface of the audio head using a dental mirror.
3) Turn screw (C) clockwise or counterclockwise until the gap of lower tape edge and the lower edge of the control head is about 0.25mm. (Refer to Fig. 4-5-1 and 4-5-2)

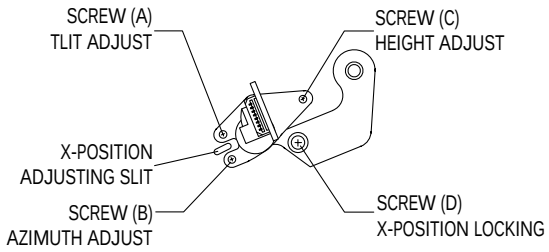


Fig. 4-5-1 Location of ACE Head Adjustment Screw

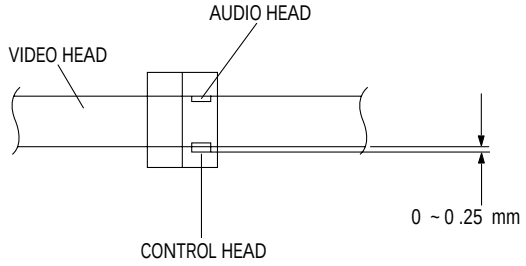


Fig. 4-5-2 ACE Head Height Adjustment

4-5-1(b) ACE HEAD TILT ADJUSTMENT

1) Playback a blank tape and observe the position of the tape at the lower flange of tape guide.
2) Confirm that there is no curl or wrinkle at the lower flange of tape guide as shown in Fig. 4-5-3(B).
3) If a curl or wrinkle of the tape occurs, slightly turn the screw (A) tilt adjust on the ACE head ass'y.
4) Reconfirm the ACE head height.

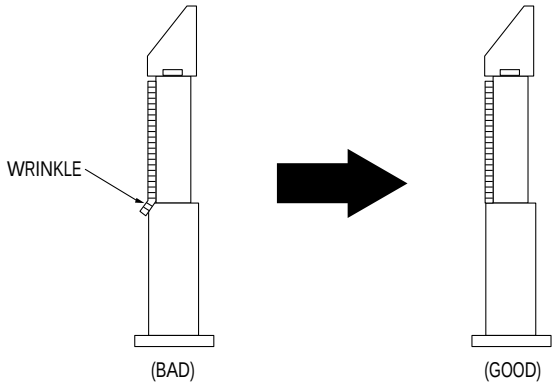


Fig. 4-5-3 Tape Guide Check

4-5-1(c) AUDIO AZIMUTH ADJUSTMENT

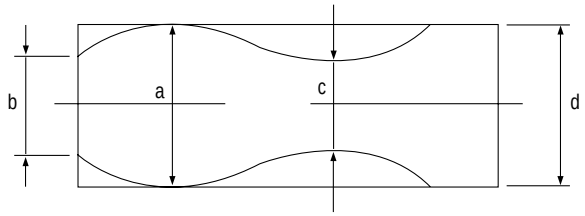
1) Load alignment tape (Mono scope) and playback the NTSC : 7KHz (PAL : 6KHz) signal.
2) Connect channel-1 scope probe to audio output test point.
3) Adjust screw (B) to achieve maximum audio level. (See Fig. 4-5-1)

4-5-1(d) ACE HEAD POSITION (X-POINT) ADJUSTMENT

1) See "2. Alignment and Adjustment" for ACE Head position (X-Point) adjustment.

4-5-2 Linearity adjustment (Guide roller S, T adjustment)

1) Playback the Mono Scope alignment tape (SP mode).
2) Observe the video envelope signal on an oscilloscope (triggered by the video switching pulse).
3) Make sure the video envelope waveform (at its minimum) meets the specification shown in Fig. 4-5-4.
   If it does not, adjust as follows :



a b c d
c,b,d/a ≧63%

Fig. 4-5-4 Envelope Waveform Adjustment

Note :
a=Maximum output of the video RF envelope.
b=Minimum output of the video RF envelope at the entrance side.
c=Minimum output of the video RF envelope at the center point.
d=Maximum output of the video RF envelope at the exit side.

4) If the section A in Fig. 4-5-5 does not meet the speci-fication, adjust the guide roller S up or down.
5) If the section B in Fig. 4-5-5 does not meet the speci-fication, adjust the guide roller T up or down.

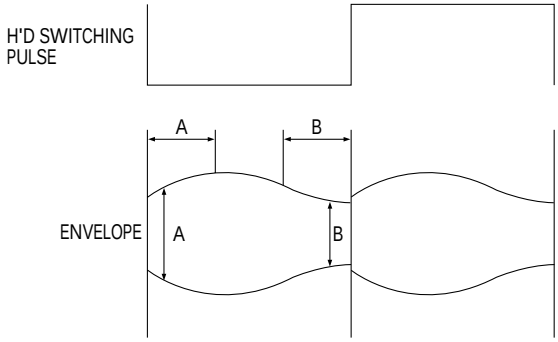


Fig. 4-5-5 Adjustment Points

6) Play back the Mono Scope alignment tape (SP mode).
7) Connect an oscilloscope CH-1 to the Envelope and CH-2 to the H'D SW Pulse for triggering.
8) Turn the guide roller heads with a flat head ( ) driver to obtain a flat video RF envelope as shown in Fig. 2-8.

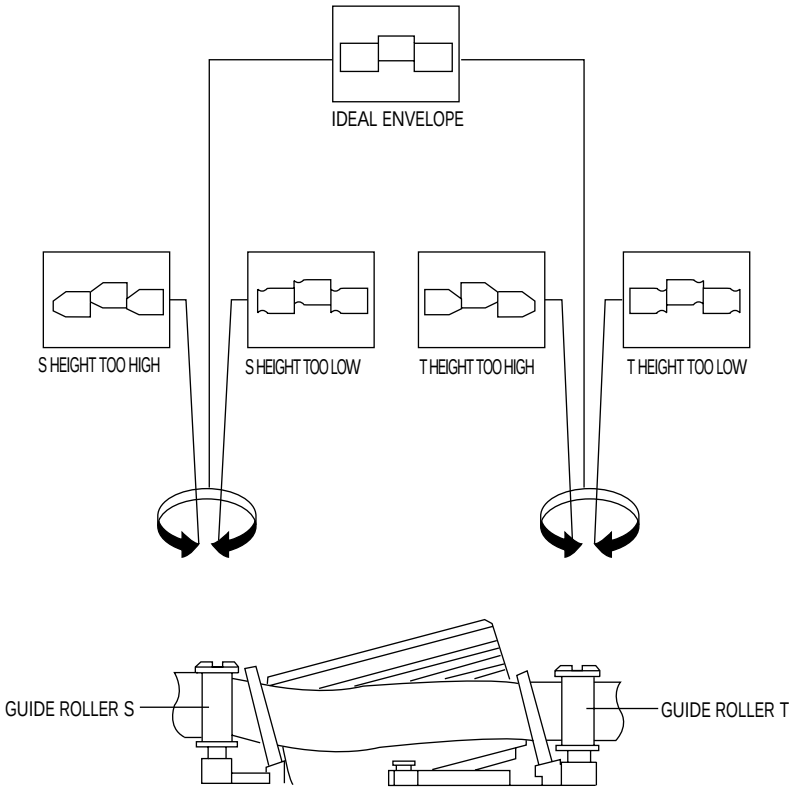


Fig. 4-5-6 Guide Roller S, T Height Adjustment

4-5-3 Check Transitional Operation from RPS to Play

Check transition from RPS mode to play mode :
Using a pre-recorded SP tape, make sure the entry side of envelope comes to an appropriate steady state within 3 seconds (as shown in Fig. 4-5-7).
If the envelope waveform does not reach specified peak-to peak amplitude within 3 seconds, adjust as follows :

1) Make sure there is no gap between the supply roller lower flange and the tape.
   If there is a gap, adjust the supply guide roller again.
2) Change operation mode from the RPS to the play mode (again) and make sure the entry side of envelope rises within 3 second.

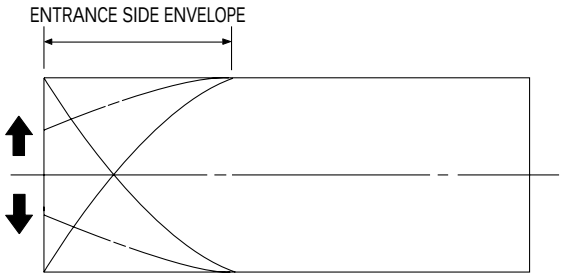


Fig. 4-5-7 Video Envelope Rising when Operation mode Changes from RPS to Play Mode

4-5-4 Envelope Check

1) Make recordings on T-120 (E-120) and T-160 (E-180) tape.
   Make sure the playback output envelope meets the specification as shown in Fig. 4-5-8.
2) Play back a self recorded tape (recording made on the unit using with T-120 (E-120).
   The video envelope should meet the specification as shown in Fig. 4-5-8.
   In SP mode, (A) should equal (B).
   If the head gap is wide, upper cylinder should be checked.

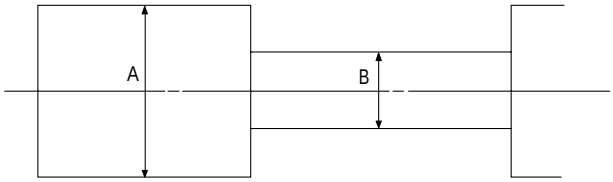


Fig. 4-5-8 Envelope Output and Output Level

4-5-5 Tape Wrinkle Check

1) Run the T-160 (E-180) tape in the playback, FPS, RPS and Pause modes and observe tape wrinkle at each guide.
2) If excessive tape wrinkle is observed, perform the following adjustments in Playback mode :

   Tape wrinkle at the guide roller S, T section :
   Linearity adjustment.
   Tape wrinkle at tape guide flange :
   ACE head assembly coarse adjustment.

4-6 Reel Torque

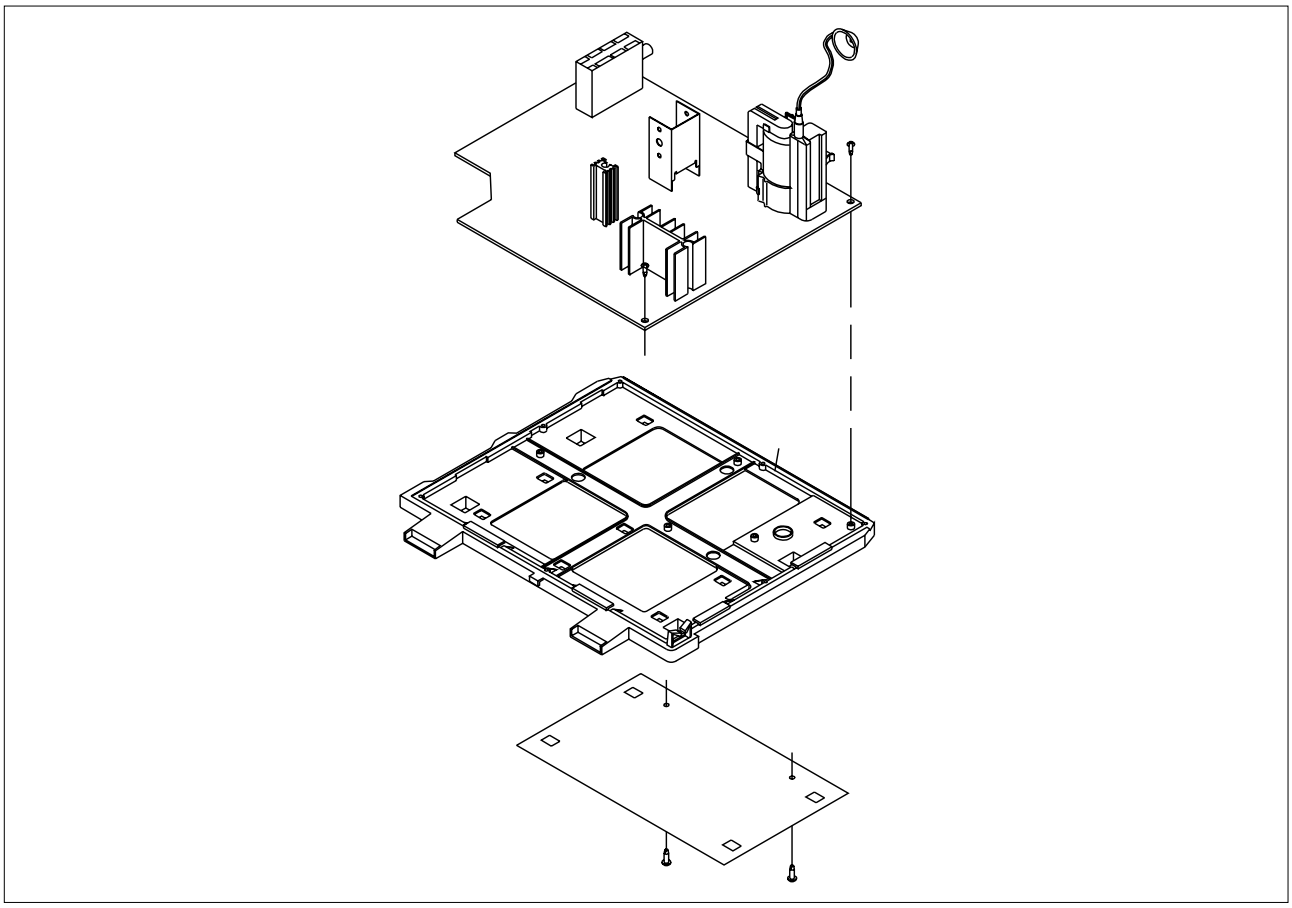
1) The rotation of the capstan motor causes the Holder Clutch Ass'y to rotate through the Belt Pulley.
2) The spring wrap PLAY/REV of holder clutch ass'y drives the disk reel S, T through gear idle by rotation of gear center ass'y.
3) Brake is operated by slider cam at FF/REW mode.
4) Transportation of accurate driving force is done by gears. (Gear Center Ass'y)

Note : If the spec. does not meet the followings specifications, replace the holder clutch ass'y and then recheck.

<Table 2-1>

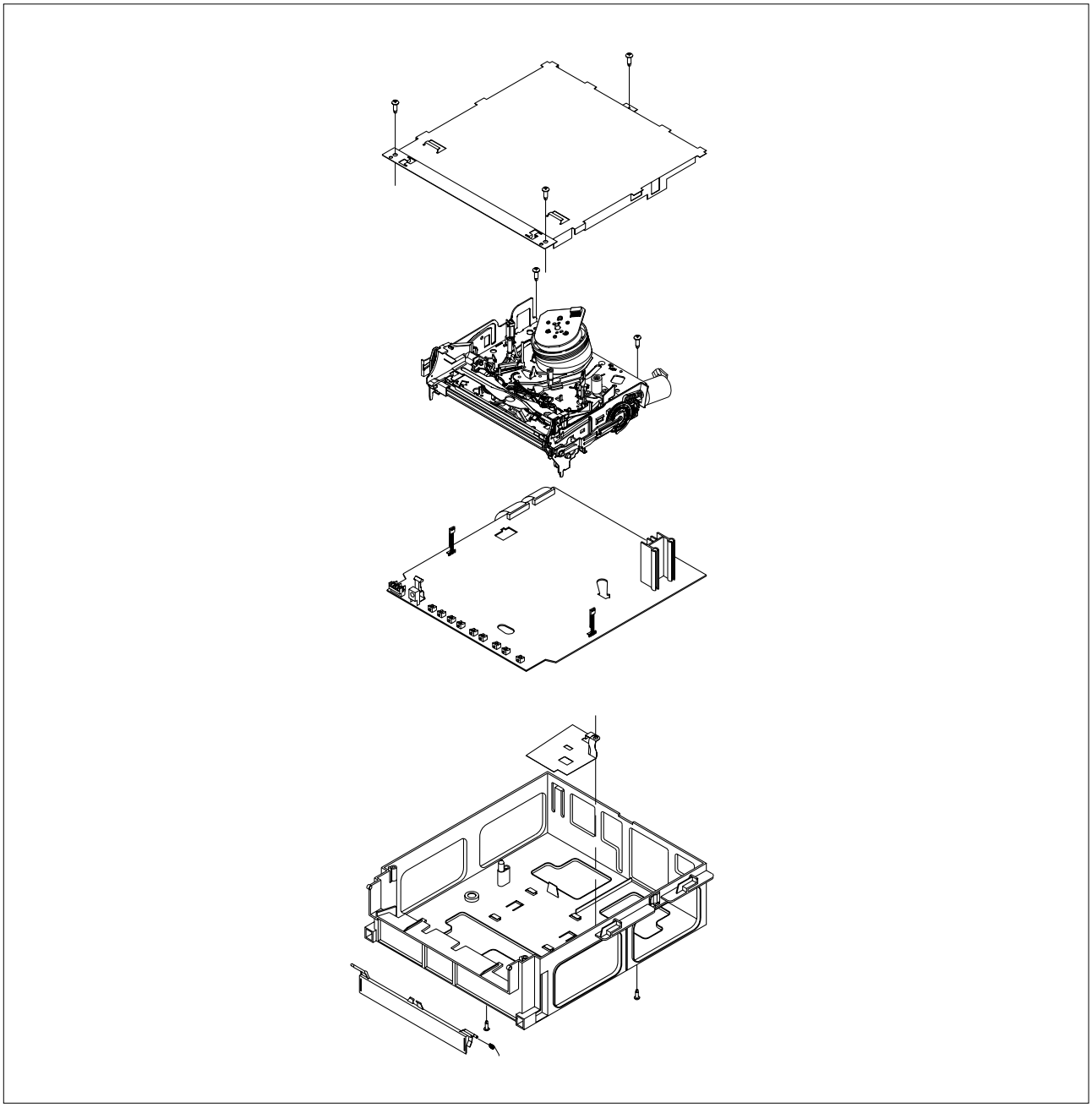
MODE	TORQUE g/cm	GAUGE
PB	42 ± 11	Cassette Torquemeter
RPS	145 ± 30	Cassette Torquemeter

3-1-2 Main Assembly Removal



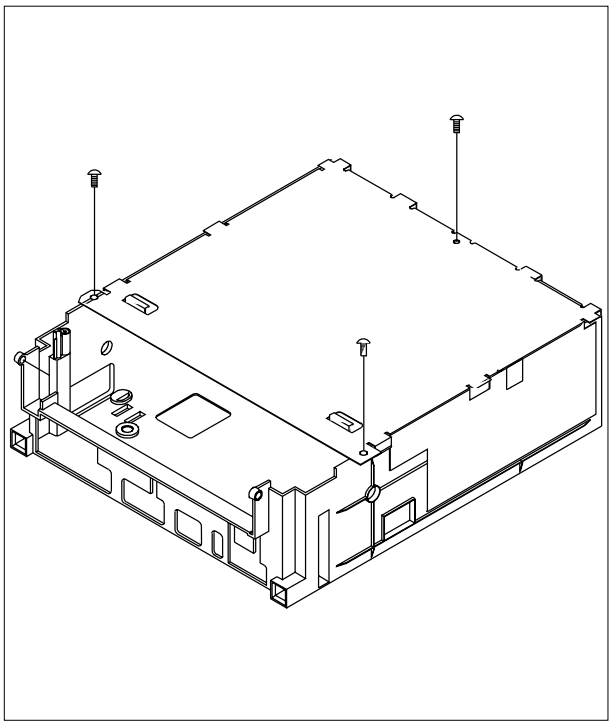
1. Release two connectors between sub PCB and Main Assembly.
2. Pull the Main Assembly backwards to remove.

3-1-3 Monitor Frame Removal



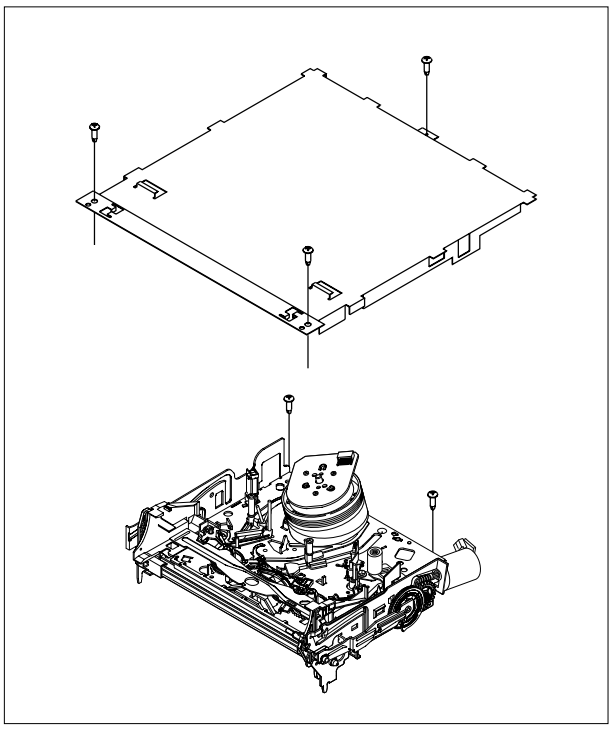
1. Remove 3 screws from the Main Assembly. Remove the dust cover.
2. Remove 4 screws from the Deck Assembly.

3-1-4 Deck Assembly Removal



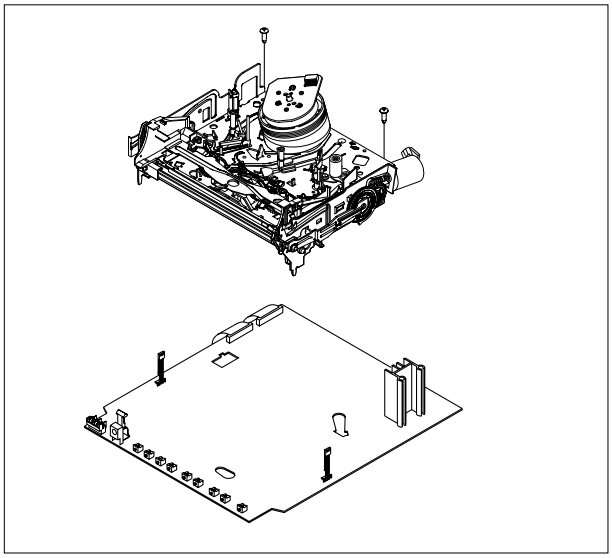
1. Remove 2 screws holding the bottom cover.
2. Remove one screw from Main PCB Assembly. Take off the deck Assembly.

3-1-5 Main Assembly Removal



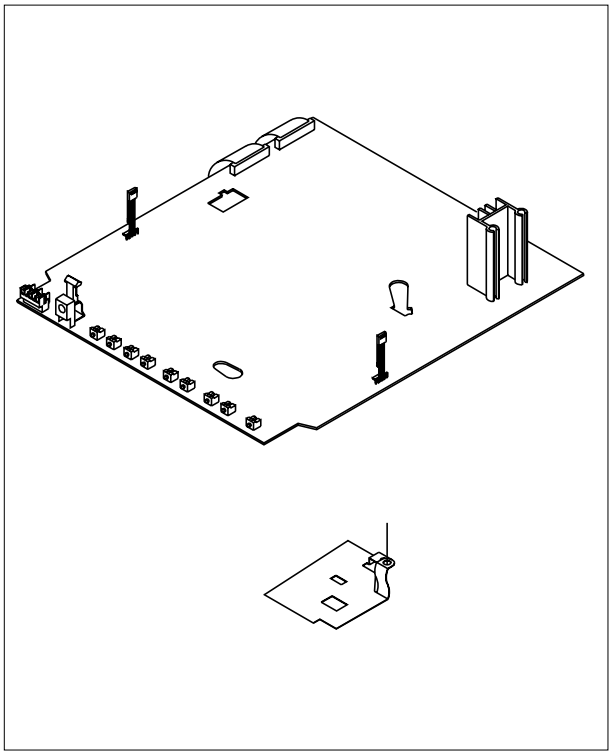
1. Remove 2 screws holding the upper chassis housing.
2. Remove 3 screws holding the deck assembly.
3. Lift the deck assembly upward to remove.

3-1-6 Top Cabinet Removal

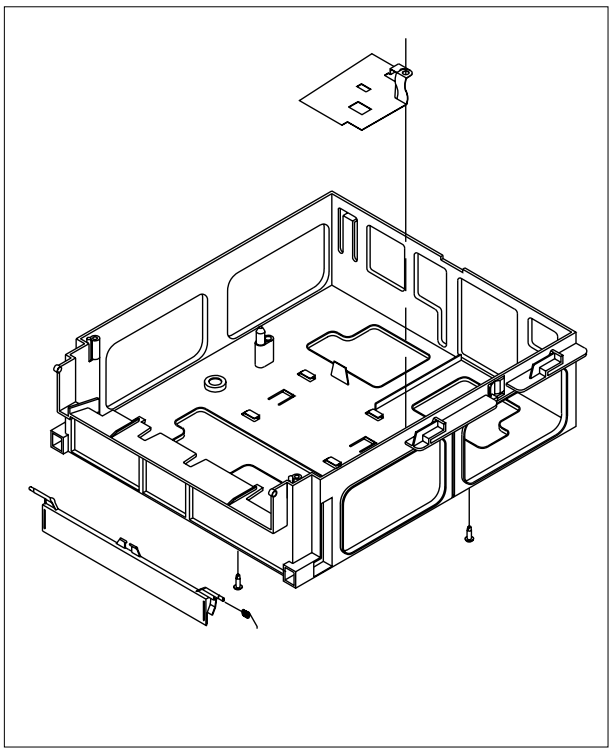


1. Remove two (2) screws located at the rear of the top cabinet.
2. Carefully lift the back of the top cabinet and shield it to the rear to remove.

3-1-7 Top Cabinet Removal



3-1-8 Top Cabinet Removal



MEMO

1-1 Safety Precautions (Continued)

9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.

10. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of this unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.

11. Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.

    To confirm that the AC power plug is inserted correctly, do the following: Using an AC voltmeter, measure the voltage between the chassis and a known earth ground. If the reading is greater than 1.0V, remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.

12. Some TV chassis are designed to operate with 85 volts AC between chassis and ground, regardless of the AC plug polarity. These units can be safely serviced only if an isolation transformer inserted between the receiver and the power source.

13. Some TV chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

14. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.

15. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.

16. Picture Tube Implosion Warning:
The picture tube in this receiver employs "integral implosion" protection. To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.

17. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.

18. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original—even if the replacement is rated for higher voltage, wattage, etc.

    Components that are critical for safety are indicated in the circuit diagram by shading, (⚡) or (⚠).
    Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications.
    A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Servicing Precautions

Warning1: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.
Warning2: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet. Follow them.

2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.

3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.

4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.

5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).

6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (430V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

8. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor (“solid state”) devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.

2. Immediately before handling any semicon ductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power—this is an electric shock precaution.)

3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.

4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.

5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.

6. Use only an anti-static solder removal device. Many solder removal devices are not rated as “anti-static”; these can accumulate sufficient electrical charge to damage ESDs.

7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.

8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

9. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

ELECTRONICS

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